

Montana Rail Grain Transportation Survey and Report 2007

**Prepared for the Montana
Wheat & Barley Committee
in co-operation with
Montana Department of
Transportation**

A Survey and Analysis

Montana Wheat & Barley Committee
P. O. Box 3024
750 Sixth Street S. W. Suite 204
Great Falls, MT 59403
Phone: 406-761-7732

Terry C. Whiteside,
Whiteside & Associates
3203 Third Avenue North, Suite 301
Billings, MT 59101
Phone: 406-245-5132
Email: twhitesd@wtp.net

Dated: November, 2008

I. INTRODUCTION

The Montana Wheat & Barley Committee, working in conjunction with the Montana Department of Transportation, Montana Farm Bureau, Montana Farmers Union, and Montana Grain Growers Association herewith submits the 2007 Montana Rail Grain Transportation Survey and Report.

The MWBC commissioned Whiteside & Associates to conduct a survey of the rail grain harvest for the fall of 2007, to assist in building further factual predicate of the transportation conditions surrounding the 2007 Montana grain harvest. The survey also sought evaluation and development of factual data on the amount of over the road hauling that the farm producers of Montana were experiencing today, 10 years ago and 20 years ago. This survey builds on the 2006 Montana Rail Grain Transportation Survey and Report conducted by Whiteside & Associates and Montana Department of Transportation. With advent and continuing expansion of shuttle 110 car grain handling facilities in the state and the loss of many rail branchlines over the last 20 years, Montana continues to see both a loss of elevators and attendant marketing outlets for Montana grain producers. The degree to which farm producers are hauling ever increasing distances is quantified in this Survey and compared to data collected in the 2006 harvest.

This project completes a second year of contiguous data providing one of the most comprehensive examinations of shipping patterns by Montana farm producers in the marketing of their grain.

This report summarizes the finding of the survey work conducted in October, 2007 through January, 2008. Whiteside & Associates on behalf of the Montana Wheat & Barley Committee appreciates the help and assistance Montana's premiere farm groups for their assistance in gathering survey data. The *Montana Farm Bureau*, the *Montana Farmers Union*, the *Montana Grain Growers Association* and the *Montana Wheat & Barley Committee* all contributed time, energy and effort to ensure the broadest cross-section of respondents to the Survey. The farm groups provided access through their Conventions for survey data collection. Additionally, *Montana Grain Growers Association* at their statewide listening sessions and through electronic surveys provided additional responses. Over 205 farm producers from twenty-five counties responded to the survey.

The survey results and study analysis show distinct patterns of increasing farm producer hauling to ever more distant elevators as the BNSF and the grain industry moves to consolidate shipments into larger, more efficient elevators called 'shuttle elevators' moving 110 car movements all the while continuing to shed smaller grain elevators in favor of more efficient and economical shuttle elevators.

The survey, while documenting the increasing hauls, also documents the increasing reliance on state and county highway systems as opposed to the state primary system. Lastly, the study compiles data on the delays and plugging of elevators experienced by the Montana farm producers during the 2007 grain harvest and evaluates the increased cost and rewards affixed to the farm producers in the marketing of their grains.

These results will serve to assist the state efforts to develop comprehensive and coordinated plan to deal with the impacts of a changing rail landscape in Montana.

II. EXECUTIVE SUMMARY

The survey in brief found:

1. Grain is being hauled further and further primarily over the state and county highway systems year over year.
2. The majority of farm producers have experienced increasing hauling distances over the past 10 and 20 years – year over year.
3. Those farm producers experiencing increased haulage are hauling over 2.-3 times as far as those farm producers who have not experienced any increased hauling distances and they hauling distances are continuing to increase..
4. The non-wheat crops are experiencing significantly greater hauling distances than wheat crops, further burdening alternative and rotational crop practices in both 2006 and 2007.
5. Some counties show average hauling distances upwards of 80-120+ miles.
6. The 2007 harvest in Montana could be best described as a tale of two cities, similar in some respects to the 2006 harvest – with Winter wheat showing average to above average yields and Spring wheat, durum, barley, pulse, peas and lentils showing average to

below average yields. Although the 2007 showed higher 'above average' production percentage response than the 2006, the two harvest years were similar in nature.

7. The vast majority of Montana farm producers have the capabilities of storing most if not all of their grain production.
8. Even with the diversity of yields, most Montana farm producers experienced elevator pluggings multiple times during harvest – due to what is perceived by the farm producers as lack of rail cars. The elevator delays did not appear as significant as those experienced in the 2006 harvest.
9. With the multiple elevator pluggings, although most farm producers held onto to their crops and waited for the rail car shortages to abate rather than take their grain to more distant elevators, many more this year sought out alternative outlets than in the 2006 survey.
10. Farm producers generally thought these delays and elevator pluggings were 'about average' and par for the course.
11. When farm producers chose to utilize alternative elevators, they encountered increased unloading delays at more distant elevators .
12. As the elevator system is being forced to larger, more rail efficient shuttles coupled with the loss of thousands of miles of rail branchlines in the state, the costs of transportation for gathering grain continues to shift from the railroads to the farm producers. This survey

quantifies the patterns which shows increased use of the State and local highway system.

13. The service levels seem to improve in 2007 over 2006. The railroad is doing considerable outreach with farm producers and it appears that service level perception improved in 2007.

14. This survey found the increased transportation costs associated with positioning grain at shuttle facilities may not fully cover the increased costs associated with getting the grain to that location.

15. The preliminary results of this study and survey already show that farm-to-rail costs are continuing to increase while the railroads may be achieving their own internal operating efficiencies through railroad and grain company investments in large part paid for by the farm and public sectors. Some areas are experiencing truck hauls of over 100 miles one way to deliver grain to market elevator.

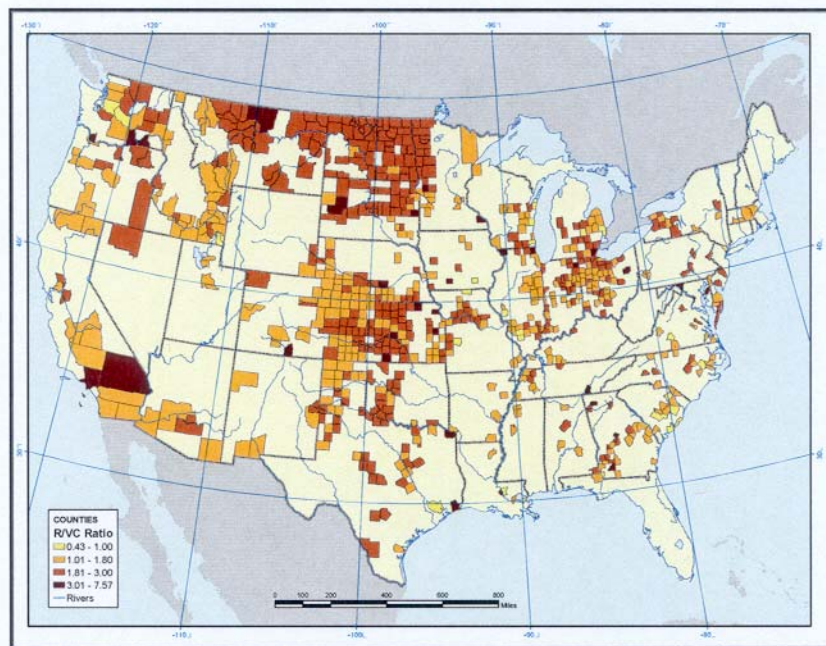
III. Farm Producers Are Unique Rail Transportation Users

Growers of wheat and barley are unique in the rail transportation world. They generally bear but do not directly pay railroad freight rates and charges. In Montana, growers are captive in a large part because virtually all grain shipments are handled by just one railroad system, BNSF or its affiliates. The BNSF con-

trols 91% of the rail mileage, and 92% of the business. Montana is ranked #1 in the U.S. for concentration of railroad lines.

Farm producers, unlike a number of other rail customers, are unable to pass rail freight costs on to any other party. The growers' grain receipts reflect rail rates as high as 300+% of railroad variable costs to move Montana grain to market – some of the highest rail rates in the nation.

FIGURE ES-3
R/VC AVERAGES BY ORIGIN COUNTY FOR WHEAT SHIPMENTS
2001-2006 CARLOAD WAYBILL SAMPLE

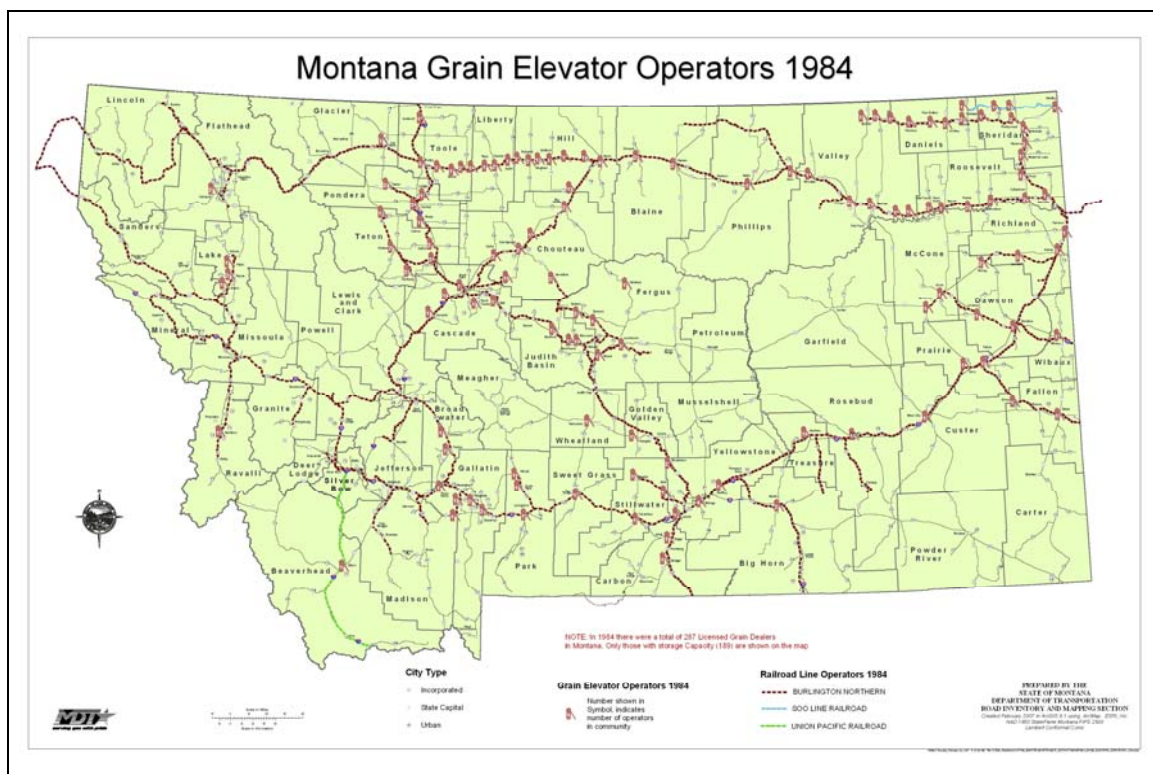


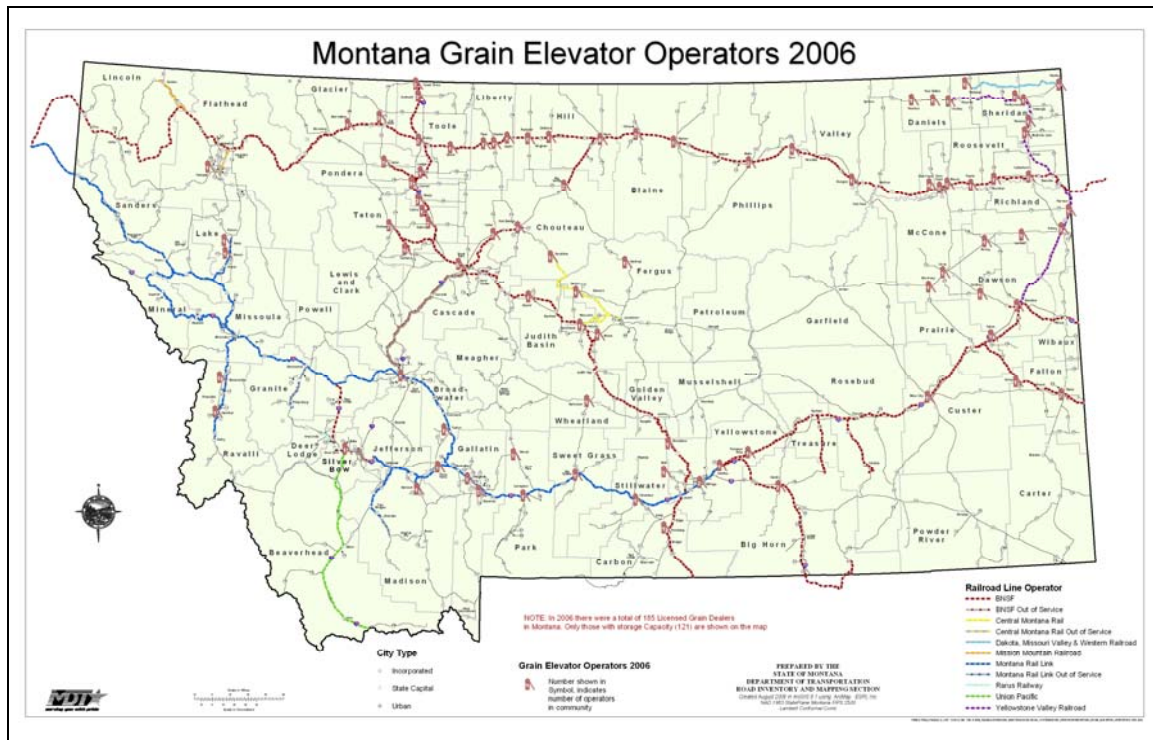
The recent Christensen Study¹ funded by the STB confirms the high Revenue/Variable Cost levels experienced by Montana farm producers (see Figure ES-3 above). This study confirms the numbers that cost consultants, and the

¹ The Christensen Rail Competition Study, entitled, "A STUDY OF COMPETITION IN THE U.S. FREIGHT RAILROAD INDUSTRY AND ANALYSIS OF PROPOSALS THAT MIGHT ENHANCE COMPETITION"

General Accounting Office have made. The GAO in their 2006 study found rates in excess of 300% in Montana and North Dakota.

In 1984 Montana had over 189 elevators operating in the state. By 2006, that number was down to about 121. The BNSF program of offering lower rail rates to 110 car shuttle facilities will continue to put economic pressure on less-than-shuttle loaders, thereby resulting, in all likelihood, in reduced numbers of Montana elevators available in the future to handle wheat and other farm products in the State.



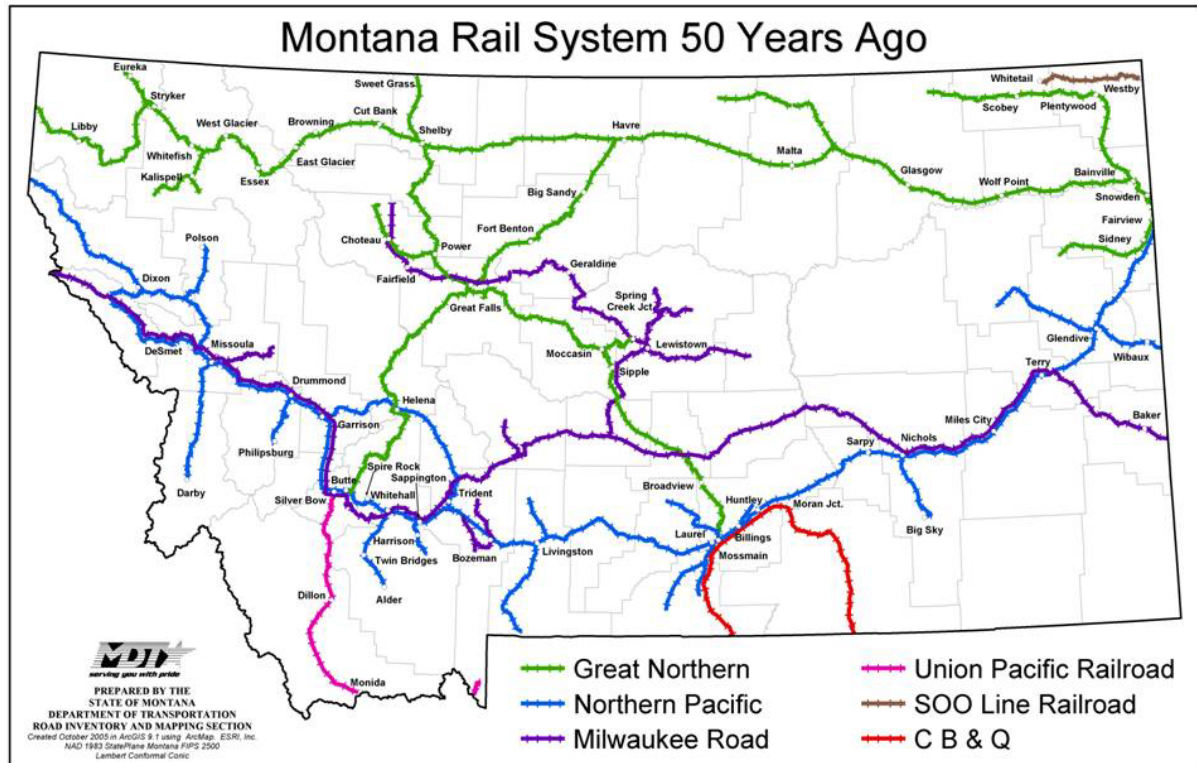


The result is that farm producers marketing their grains, are being required to haul their grain further and further each year. In the 2006 and in this Survey the farm producer grain hauling has been quantified.

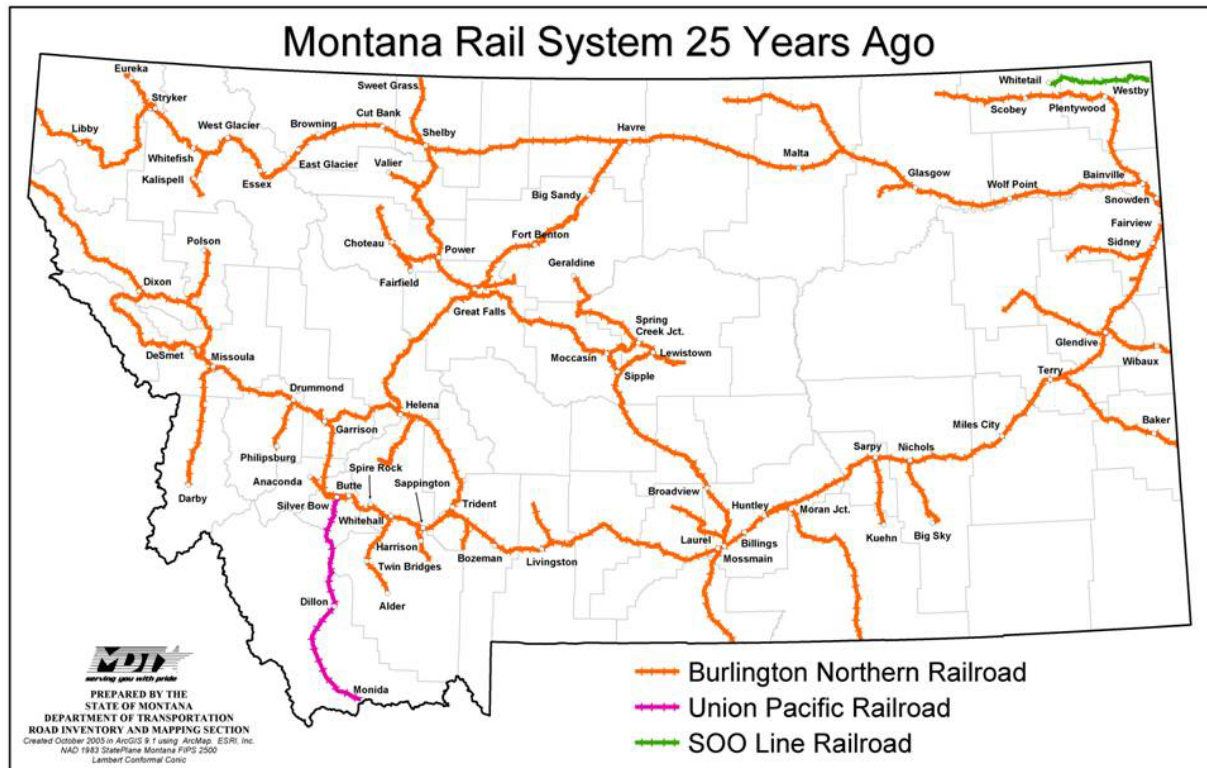
The BNSF has embarked on a program of encouraging, through rate differential and other incentives on a shuttle 110 cars, the development of larger rapid loading elevator facilities.

IV: BASELINE FOR THE MONTANA 2007 RAIL GRAIN TRANSPORTATION SURVEY AND STUDY

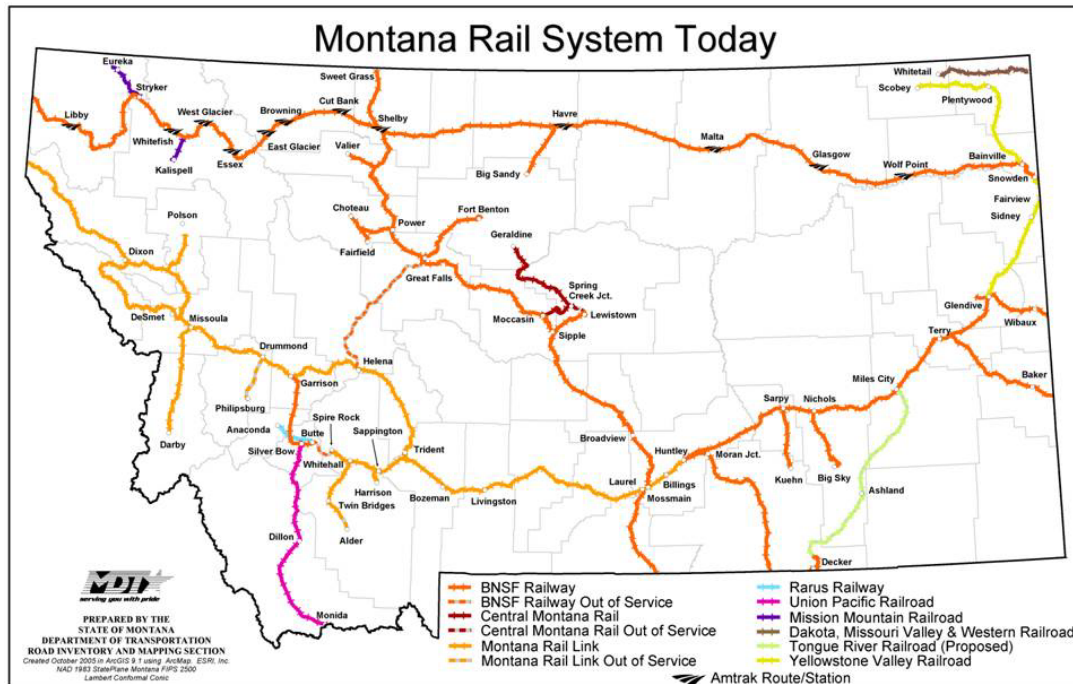
Montana Rail System – a look back in history



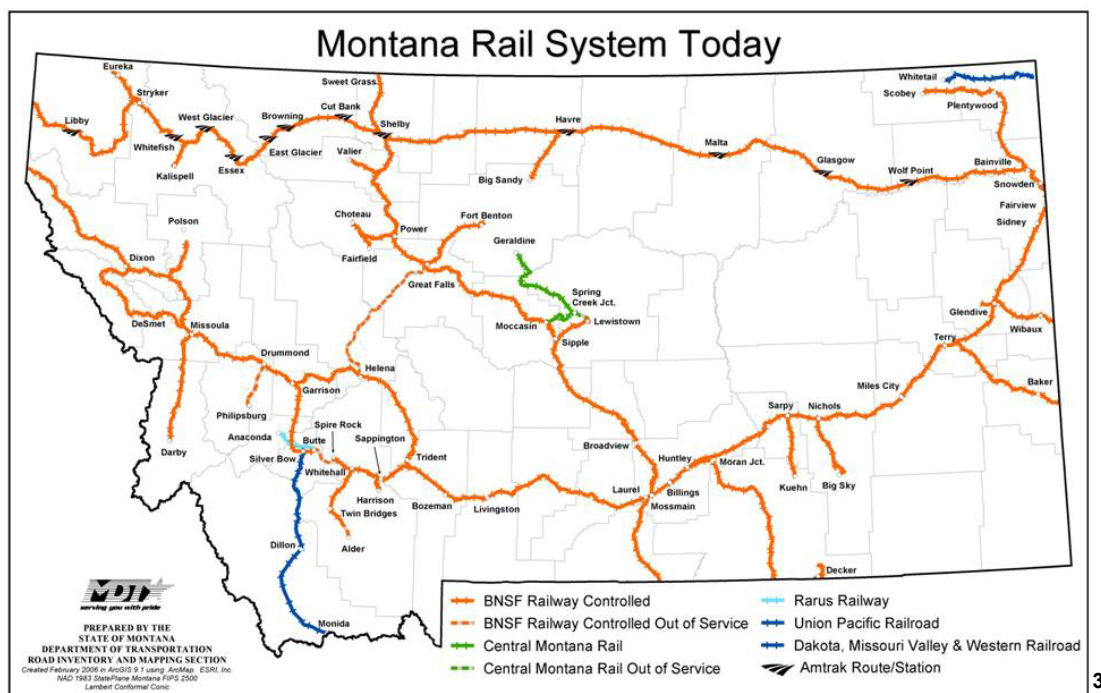
2



² Source: Montana Department of Transportation



When looked at from the perspective of economic control (ability to price rail service) the Montana rail system is dominated by a single railroad (see chart below).



3

Montana's Rail System is Shrinking

1975: 5,100 miles

2006: 3,200 miles

Dominant Class I Railroad (BNSF)

94% of Montana's rail system-#1 in US

91% of tons hauled

92% of revenue

Developing Trends

Increased short lining & potential abandonments

Transportation cost shifting from Railroads to Farm producer and State and local governments

Decreasing intermodal facilities

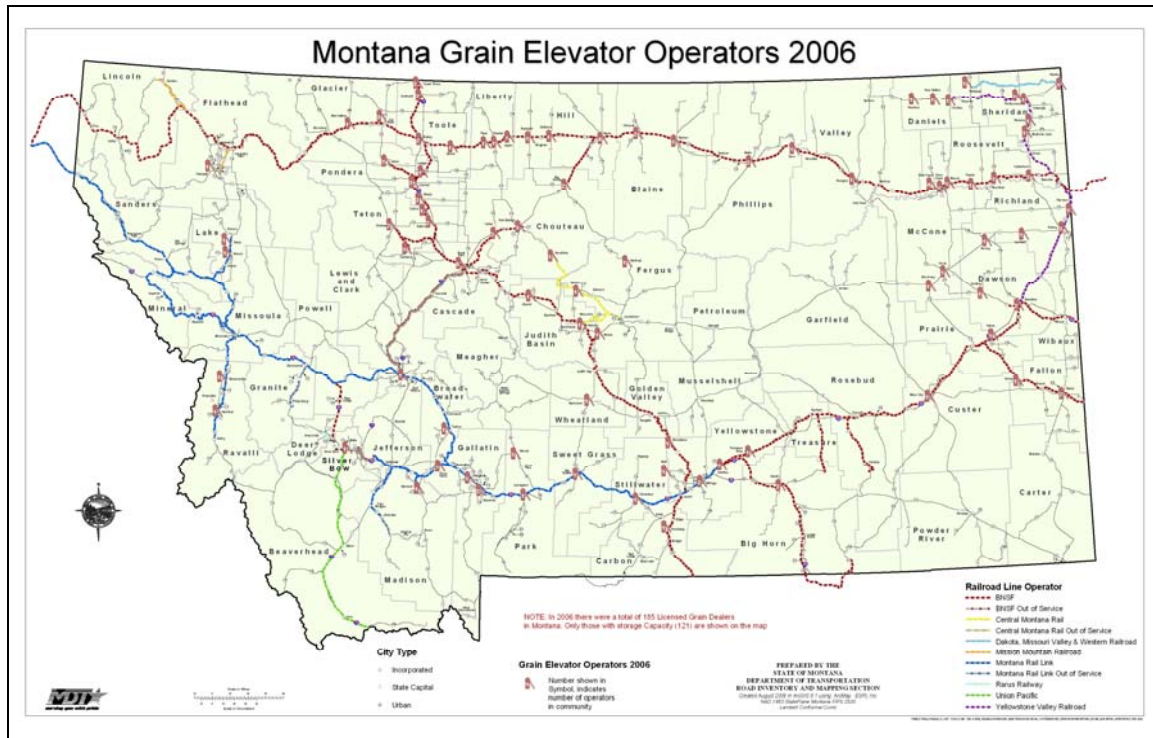
Decreasing number of grain elevators and marketing outlets for Montana agricultural crops

Continued increase in use of Montana highways for initial haul to ever more distant grain elevators.

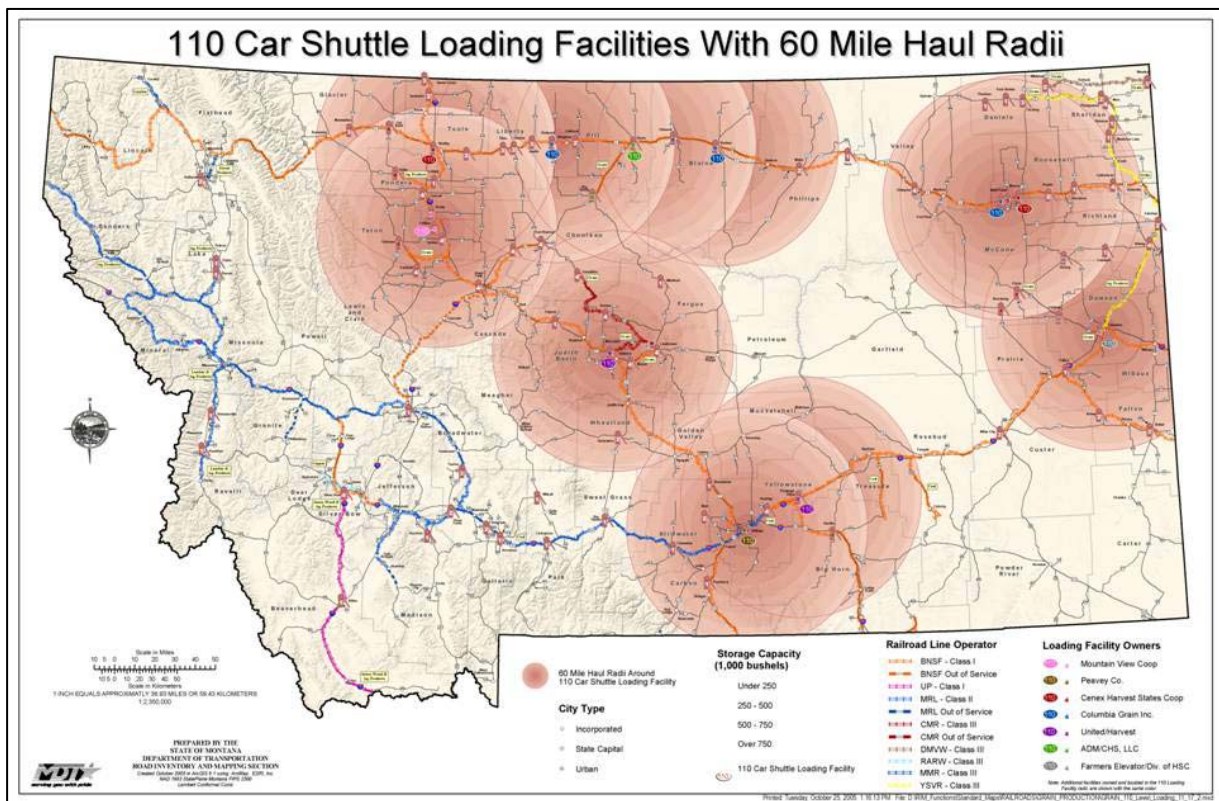
³ Source: Montana Department of Transportation

Montana Grain Elevator System – a look back in history

In 1984, the Montana grain elevator system consisted of over 189 elevators. Most of the facilities in Montana were 52 and 26 car loading facilities with the rest being facilities that load single cars.



In 2000, the BNSF started providing economic incentives to elevator companies to push for construction of Shuttle loading facilities capable of loading 110 car trains. Today, Montana has 12 shuttle facility locations (two more planned or under construction –Moore and Westby) and the map below shows each facility location with a 60 mile radial circle around to simulate potential drawing area. In fact, shuttle facilities may draw upward to 100 miles against smaller elevator facilities which have higher freight rates.



V. SURVEY AND STUDY RESULTS

Grain Yields:

In Montana, 2007 was a year (very similar to 2006) in which yields were both above average or below average depending on the crop being grown and the location of the growing area. Montana is a large state and traditionally produces the third largest wheat crop of any state in the U.S. Part of the state grows winter wheat (wheat that is planted in the fall – goes dormant in the winter – and then grows to maturity in the spring/summer), spring wheat (which is planted in the spring for maturity in the summer), barley (which is planted in the spring for

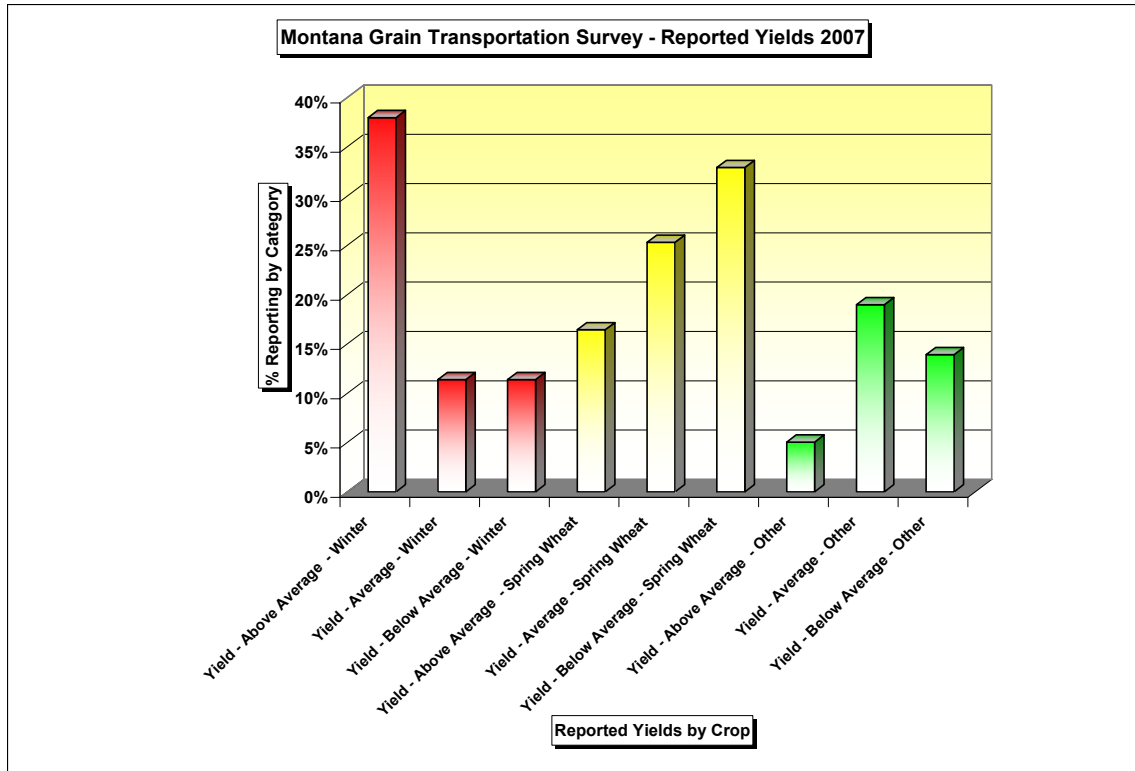
⁴ Source: Montana Department of Transportation

maturity in the summer), durum (which is planted in the spring for maturity in the summer) and various peas and lentils and other pulse crops which are planted in the spring for maturity in the summer.

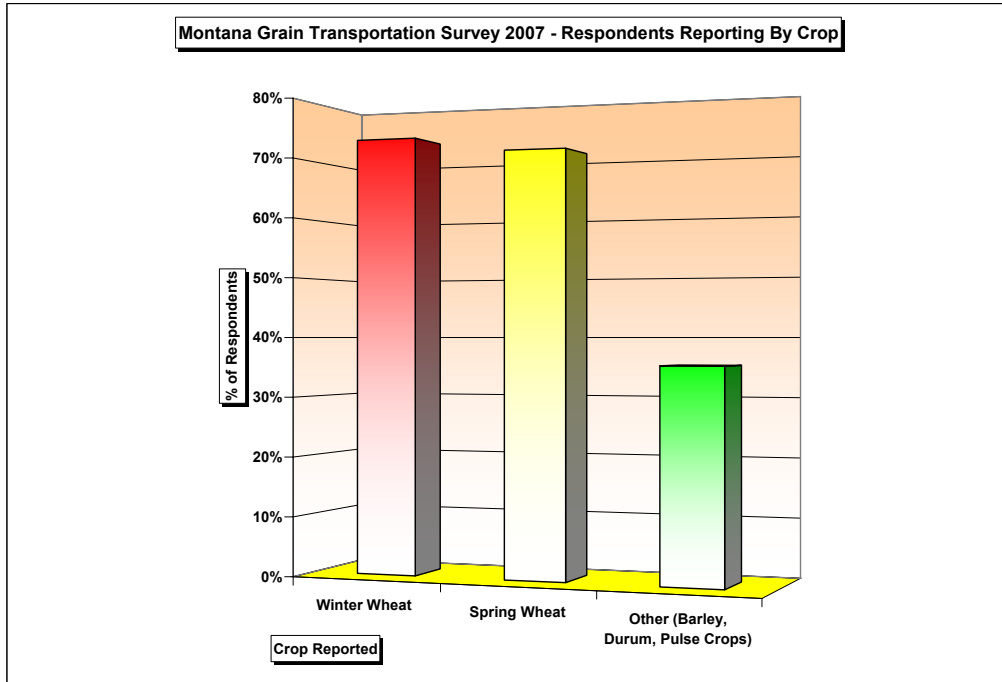
Parts of Montana produced above average crop yields while other parts had less than average yields. Generally, the winter wheat crop was above average and the spring planted crops were at or below average.

The reported yields by the respondents to the study clearly showed this variance in production. Elevators were often "plugged," that is, they could not accept more grain because they were at full capacity. Rail service problems in the view of the farm producers appear to be a major cause of these conditions, which occurred despite the fact that rail rates and charges on Montana grain shipments are extremely high.

While economists do not expect railroads to carry a fleet of cars sufficient to meet peak demand, with the sequencing of grain harvest south to north on the Great Plains, there continues to be annual shortages of rail equipment when it is needed. The railroads appear to be stepping up their efforts by surveying and planning with growers and grain companies to better anticipate the harvest movements into the elevators.

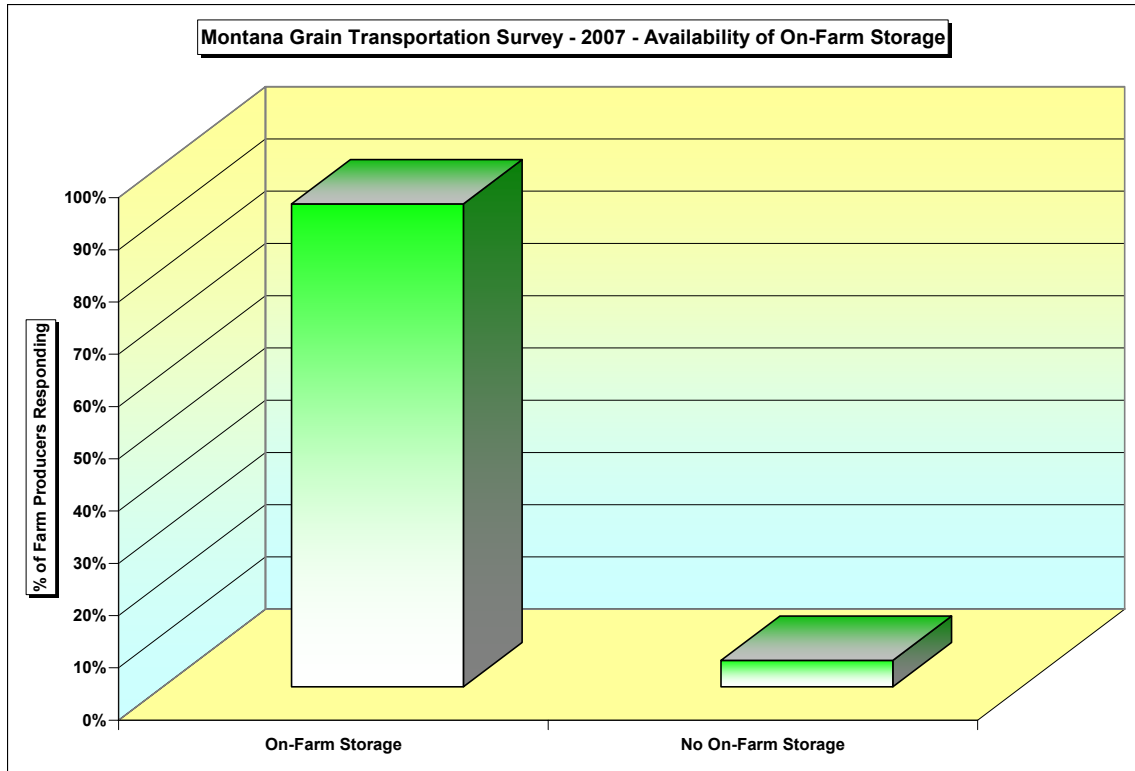


The study showed a general balance for the crops harvested in Montana, geographically the 4th largest state in the Union. Over 70% of the respondents grew winter wheat and over 70% of the respondents grew spring wheat and approximately 35% of the respondents grew other major crops (barley, durum, peas, lentils, etc.).

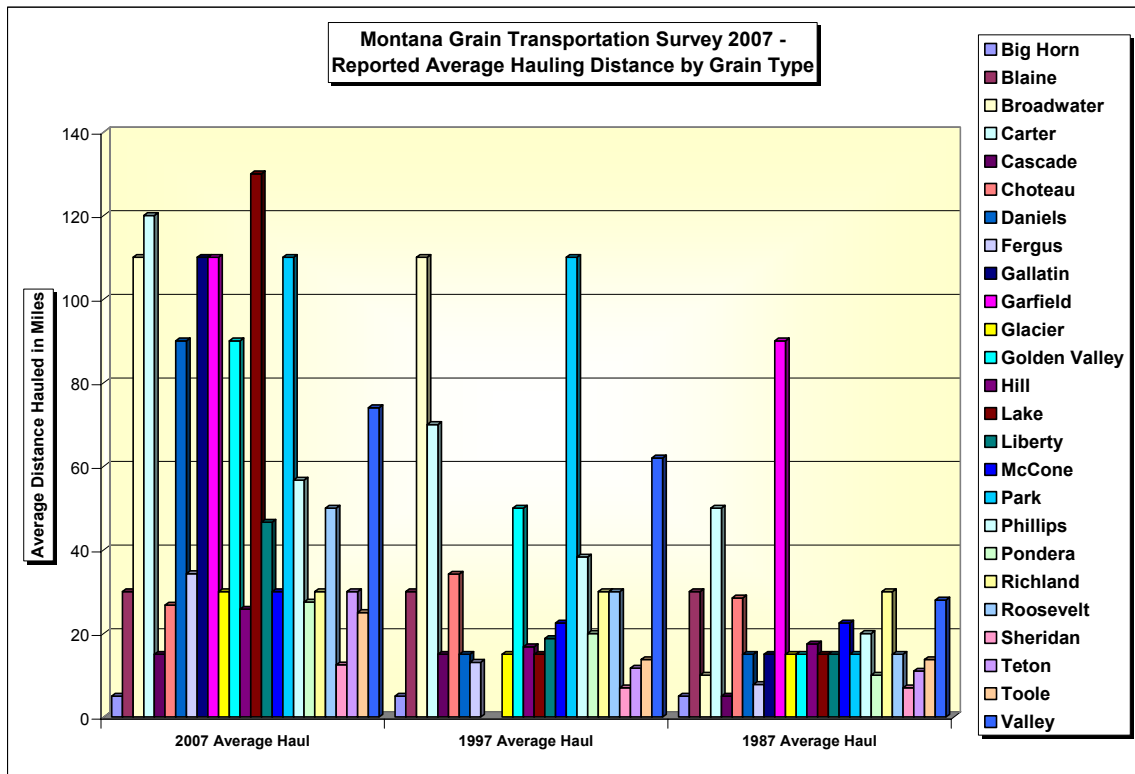


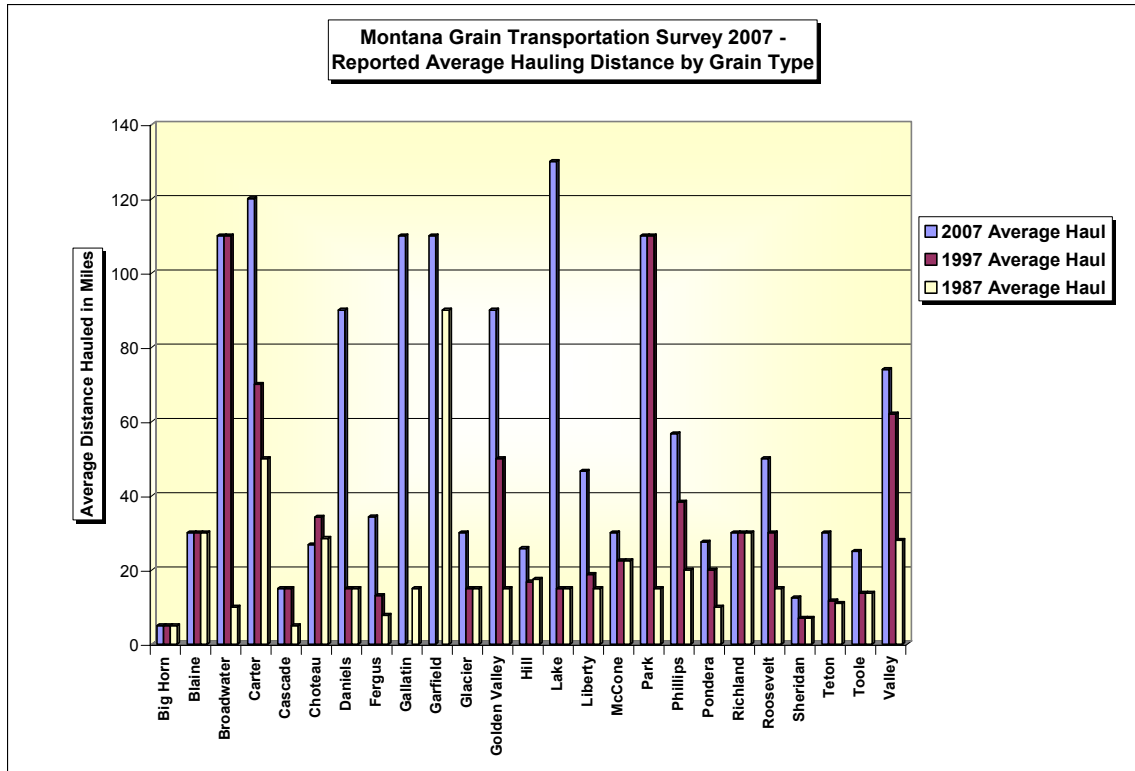
Over 92% of the farm producers responding to the survey had on-farm storage with the ability to store some or the entire crop after harvest before delivery to the grain elevator. This has become a necessity given current price fluctuations, hedging, longer market seasons and transportation logistics.

The primary driver in the past for the construction of on-farm storage was government programs encouraging (incentives) building of on-farm storage. More recently, the farm producers find that there is a year round market for grain and marketing practices, hedging, etc. and on-farm storage allows forward contracting and timing deliveries around more favorable pricing. However, many farm producers indicated in their responses, that one of the main driving forces for on-farm storage today is to make sure that all of the grain harvested on the farm can find covered storage.



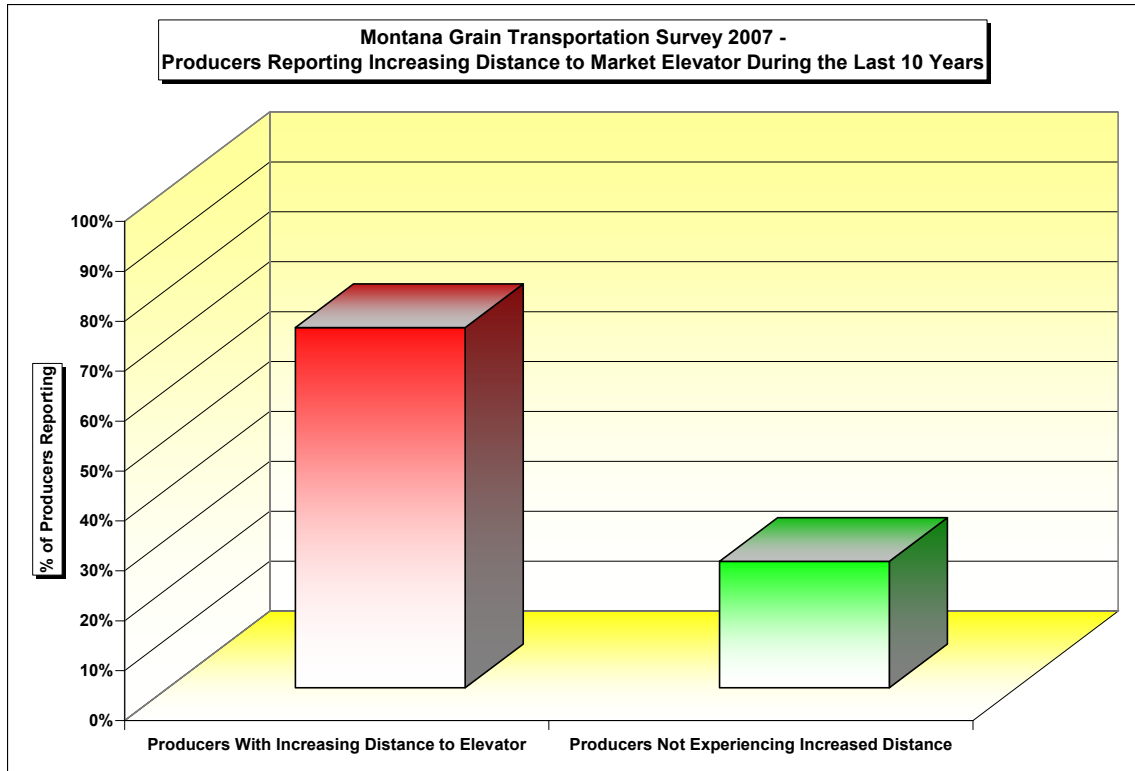
Grain producers from twenty-five counties (virtually all of the grain producing counties in Montana) reported a range of average hauling distances to the marketing elevator for the 2007 season, as shown in the graph below. Clearly the distances vary with the counties and the crops. As outlined in the 2006 and 2007 Montana Rail Grain Transportation Survey and Report, the greatest distances shown on the graph are for producers in Carter County at 130 miles (one way) and Lake County at 175 miles (one way) for both winter and spring wheat with six Montana counties showing average hauling distances over 100 miles. In this analysis, the material is presented by both county analysis and by-year breakdown to help interpret the data. As identified in the 2006 and 2007 the 'Other' crops (durum, barley, peas, lentils and other pulse crops) show higher hauling distances.



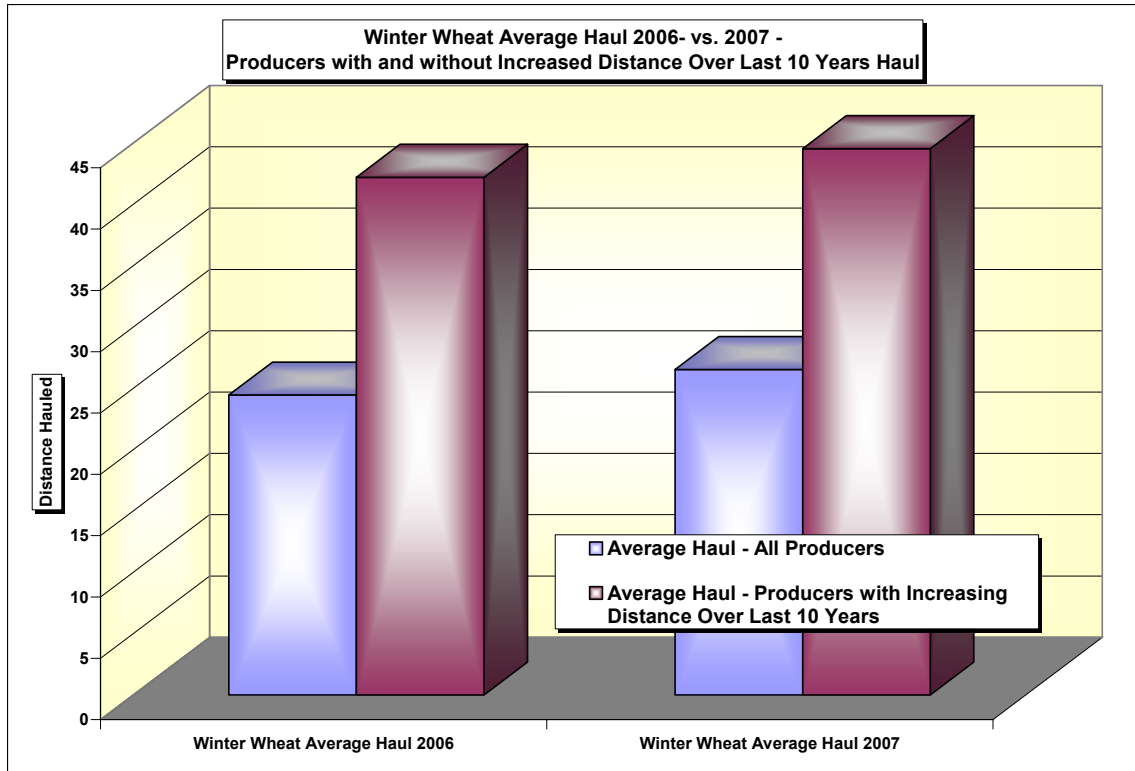


The survey requested respondents to indicate whether their hauling distances have increased over the past 10 years.

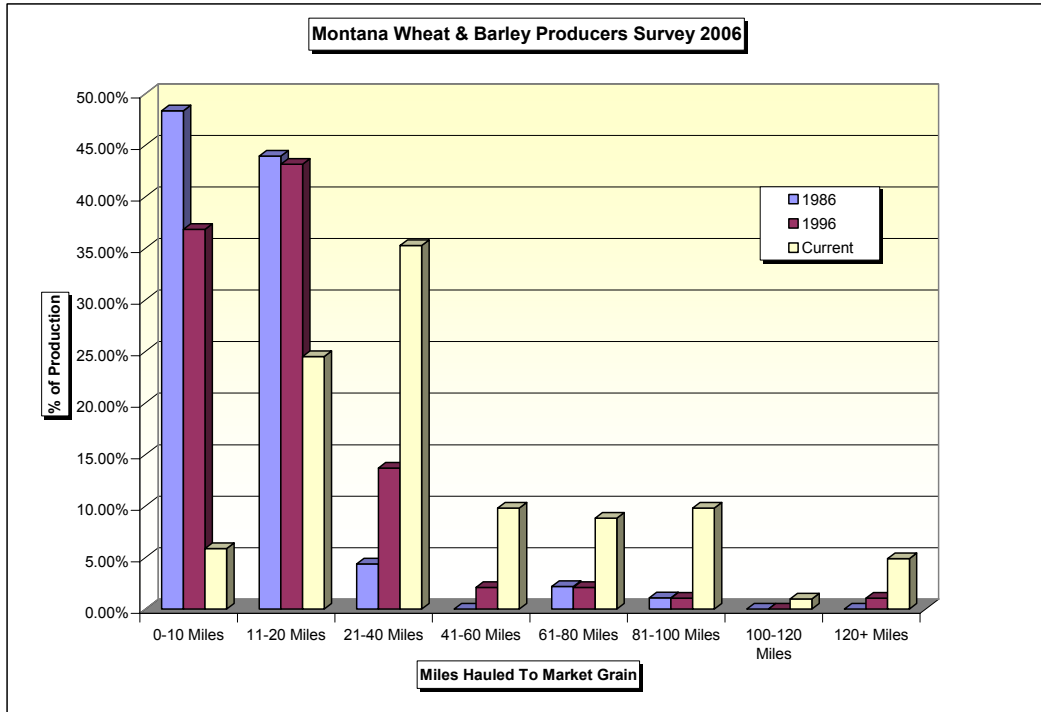
For the second year, over 70% of the Montana grain producers are hauling their products farther than they were 10 years ago, and



100% of those hauling farther than 10 years ago are also hauling farther than they were 20 years ago. This trend reflects in large part, the transition to a smaller number of elevators located ever most distant in the state, requiring increased hauling of grain for farm producers to get their grain in a market position.

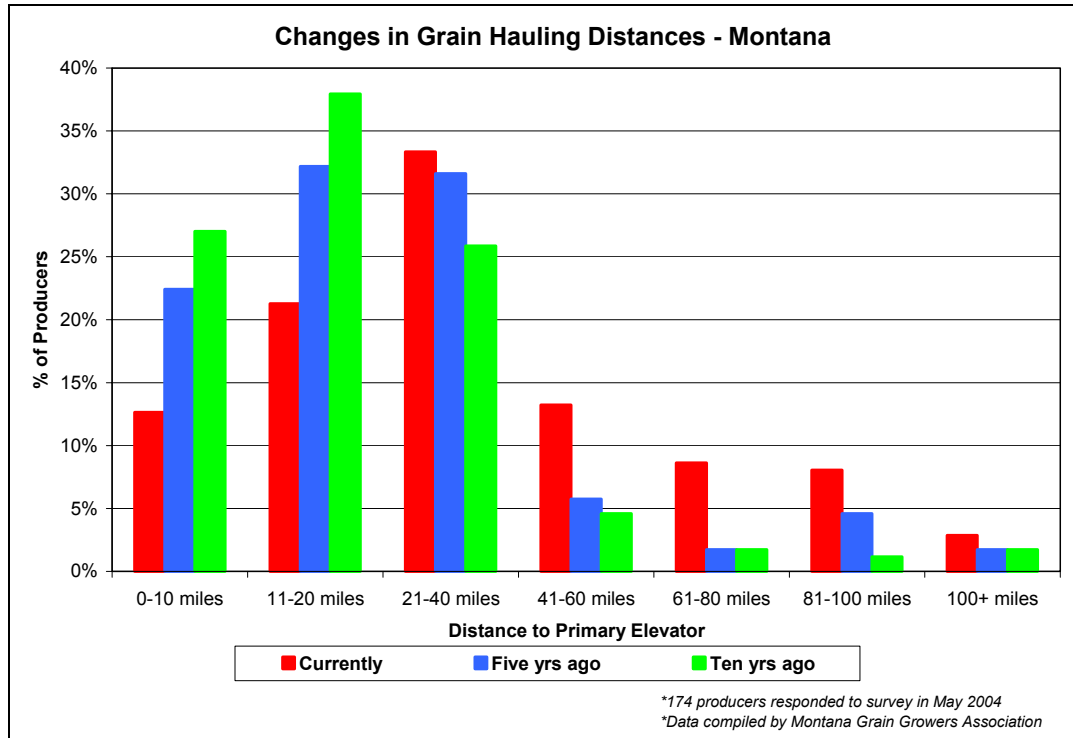


When the distances are tracked for all respondents, it is clear that the average distances are continuing to increase substantially – mirroring the results of both the 2004 Montana Grain Growers Association survey and the 2006 Montana Rail Grain Transportation Survey and Report previously presented to the MT Rail Service Competition Council (Spring, 2007).

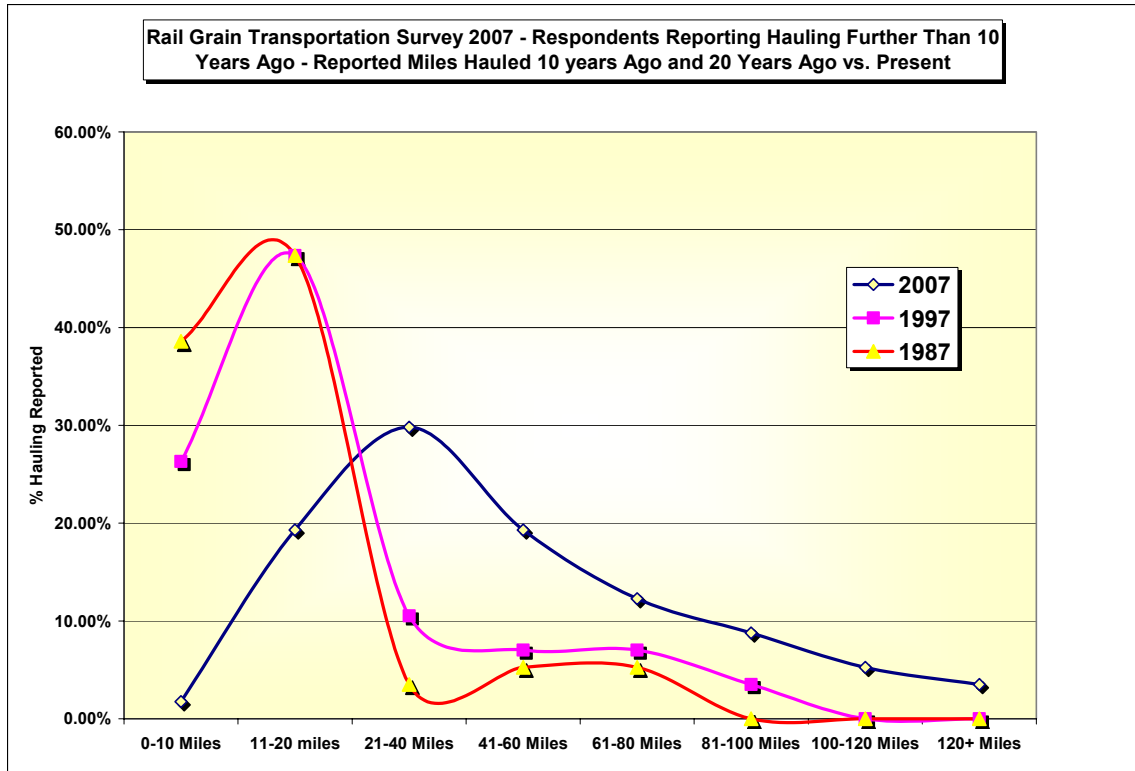


When displayed in a bar graph, the trend of ever-increasing longer hauls is clearly demonstrated. The Montana Grain Growers Association study

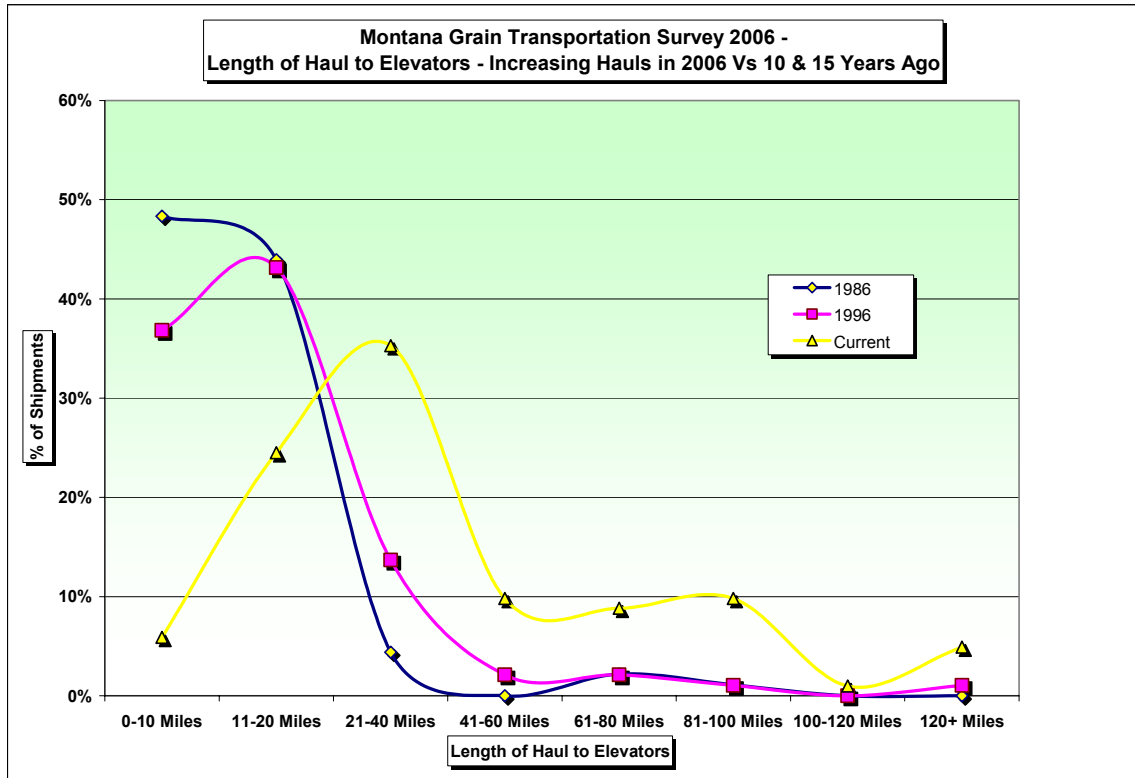
conducted in May, 2004 shows very similar trend results, supporting



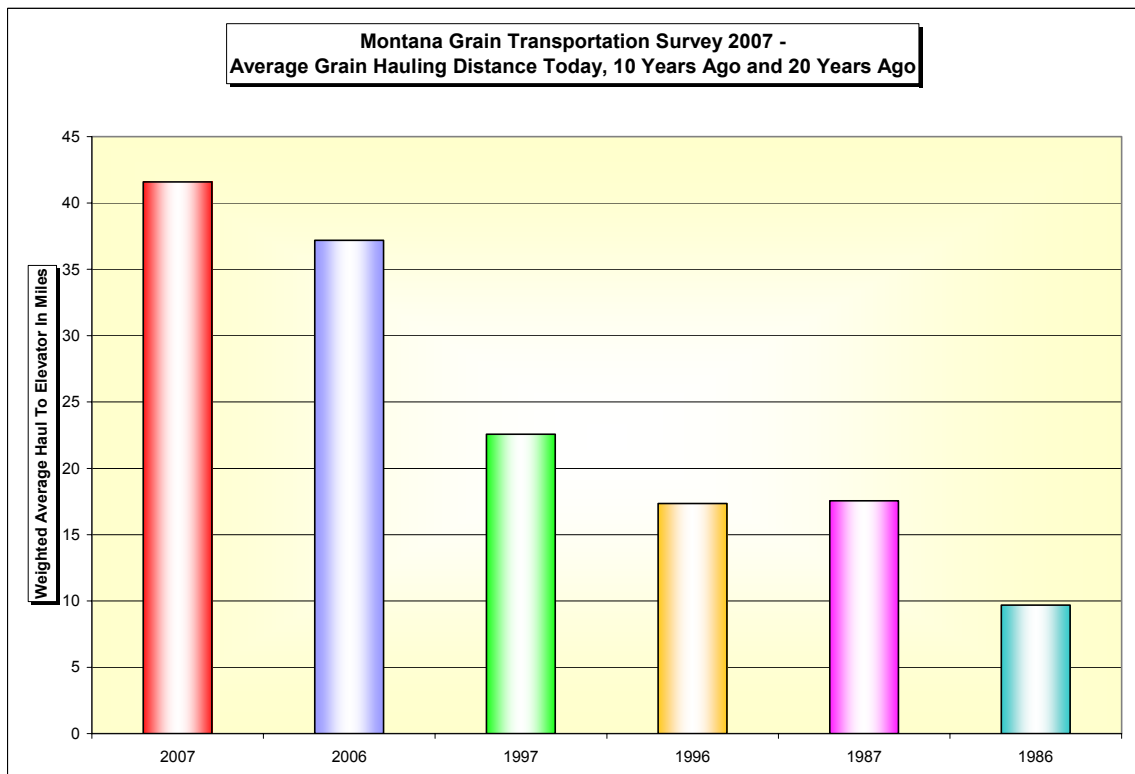
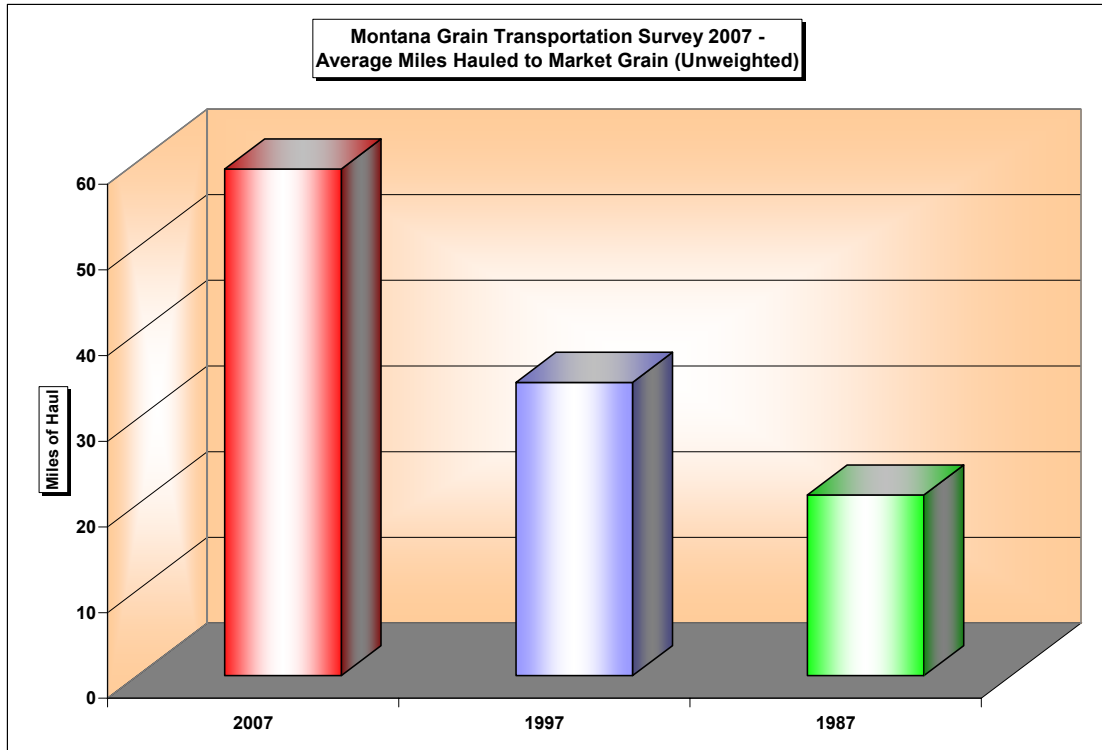
the results in the MT RSCC Montana Rail Grain Transportation 2006 study. The evidence is thus strong that the trend to longer and lengthening hauls is real. It is also noteworthy that the number of hauls with average mileages in the 41 to 100 mile blocks has increased dramatically in the last 10 years.



The data from all respondents shows an average one way haul in 2007 of 41.60 miles compared to an average haul of 22.58 miles 10 years earlier (an increase of 84%), and 17.55 miles 20 years earlier (an increase of 137%). Notably, 70% of all respondents are showing increases in hauling distances.

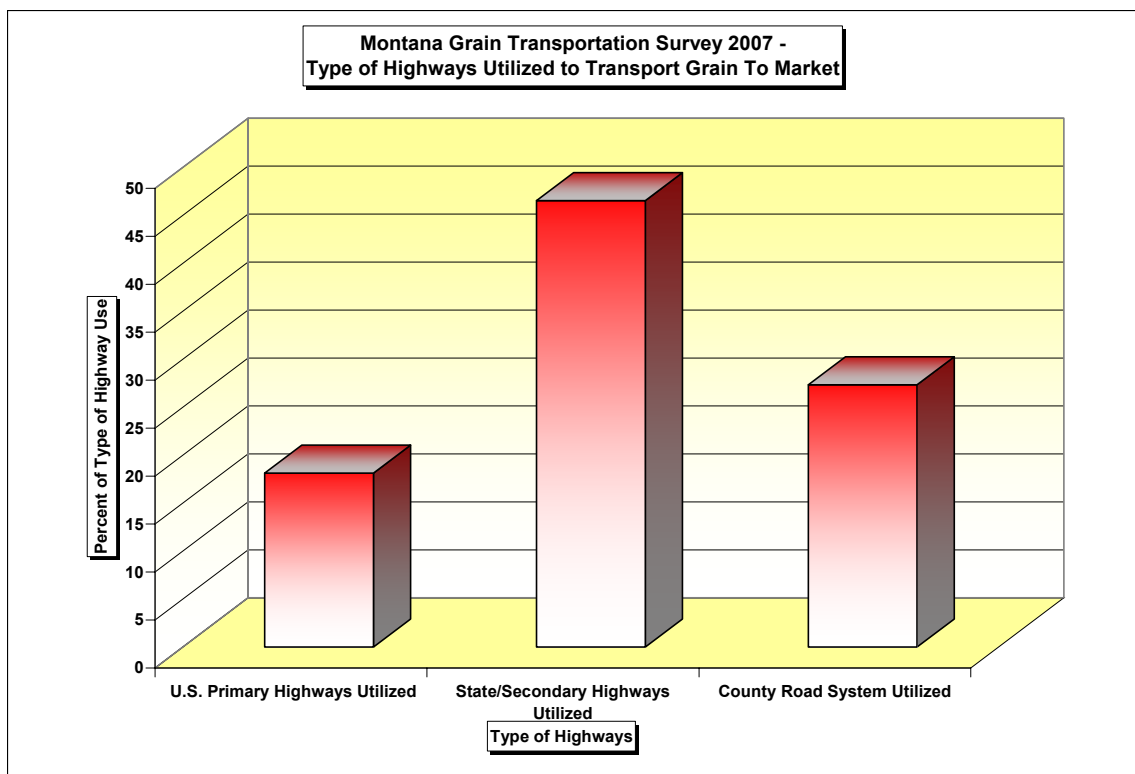


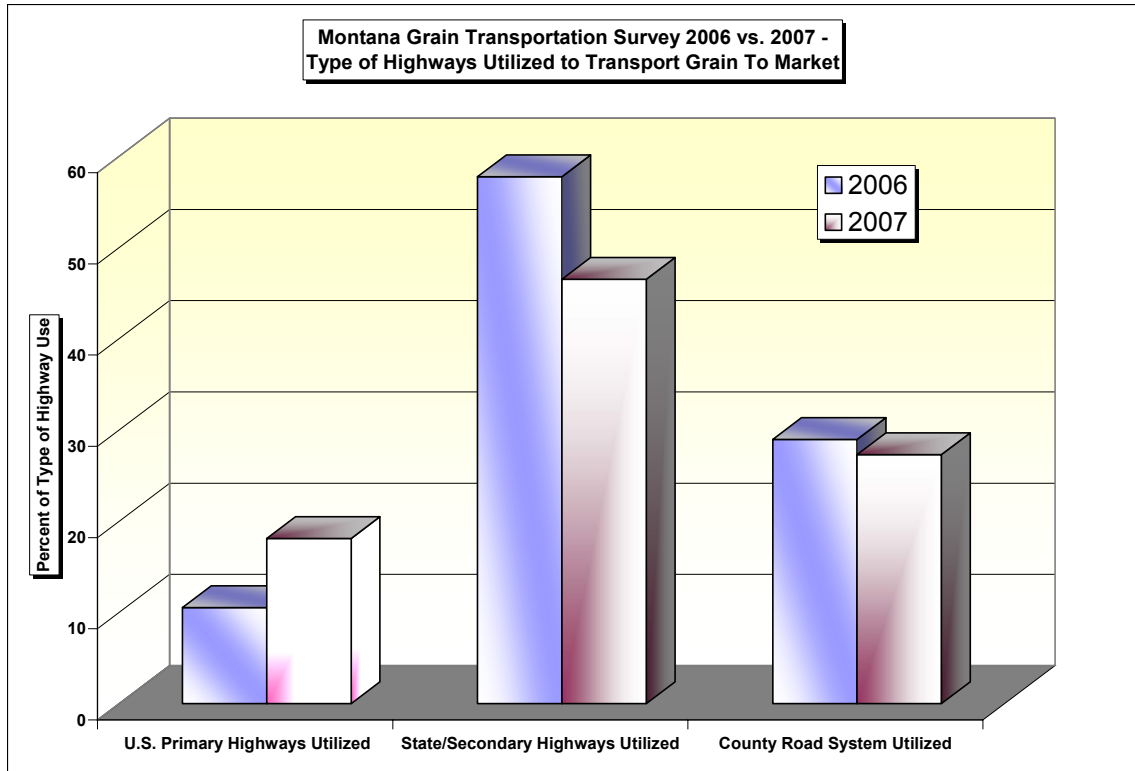
When comparing the 2007 Survey with the 2006 Survey the average reported haul increased in 2007 from 37.19 (2006) to 41.60 (2007) miles (up 11.85%) (for year to year comparisons see charts below). The conclusion is that the average haul by Montana farm producers is continuing to increase substantially.



Additionally, this increase in average haul takes place predominantly on Montana's secondary highway system and local byways(county). Thus the movement to fewer numbers of grain elevators served by BNSF and its affiliates has led to increased costs and burdens to producers trucking farther and farther, and increased costs and burdens to the State of Montana in higher highway maintenance costs – particularly on State secondary highways. In the 2007, there was a small reduction in secondary highway use and a small increased in primary highway use, but the distance being hauled continued to increase.

It is significant that these added trucking and highway costs are locally borne costs.

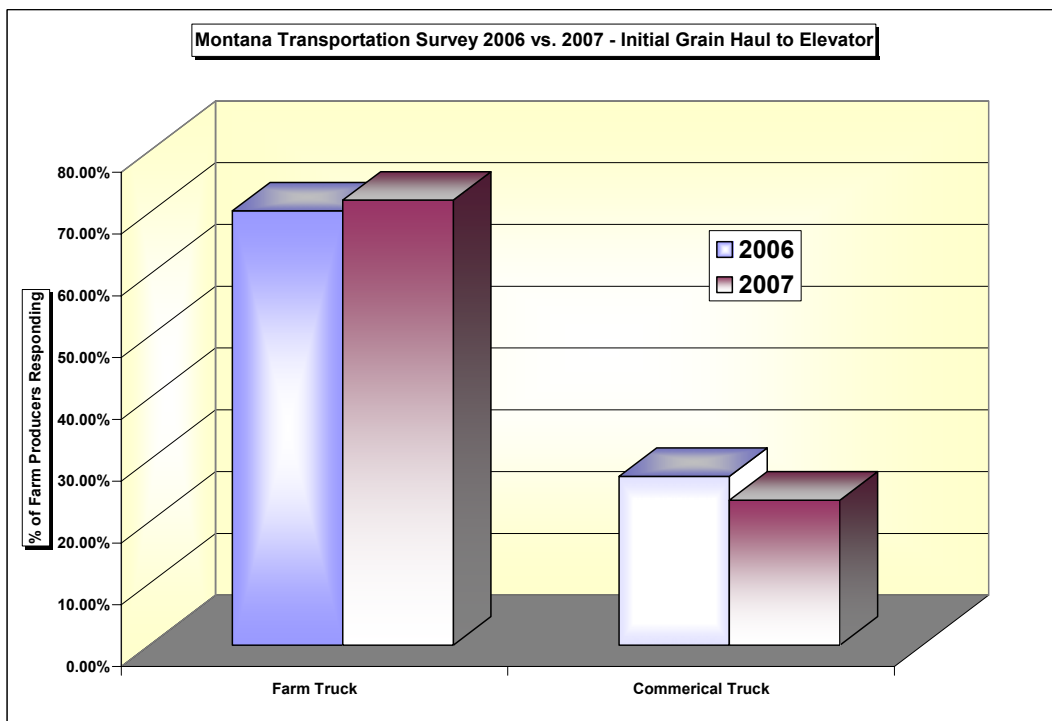
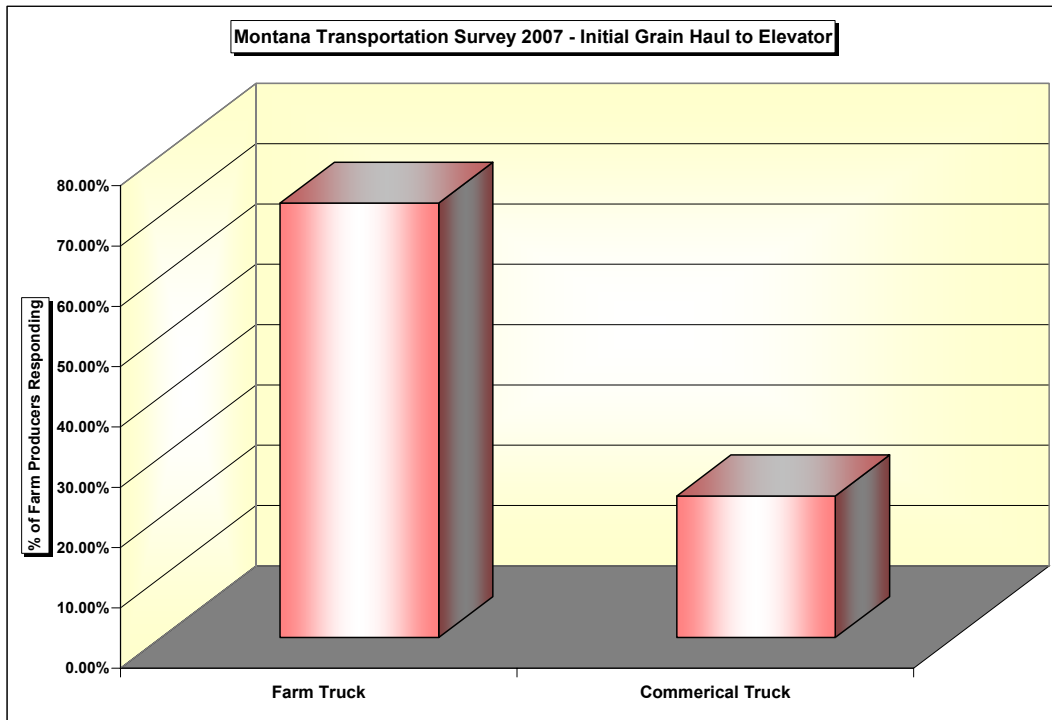




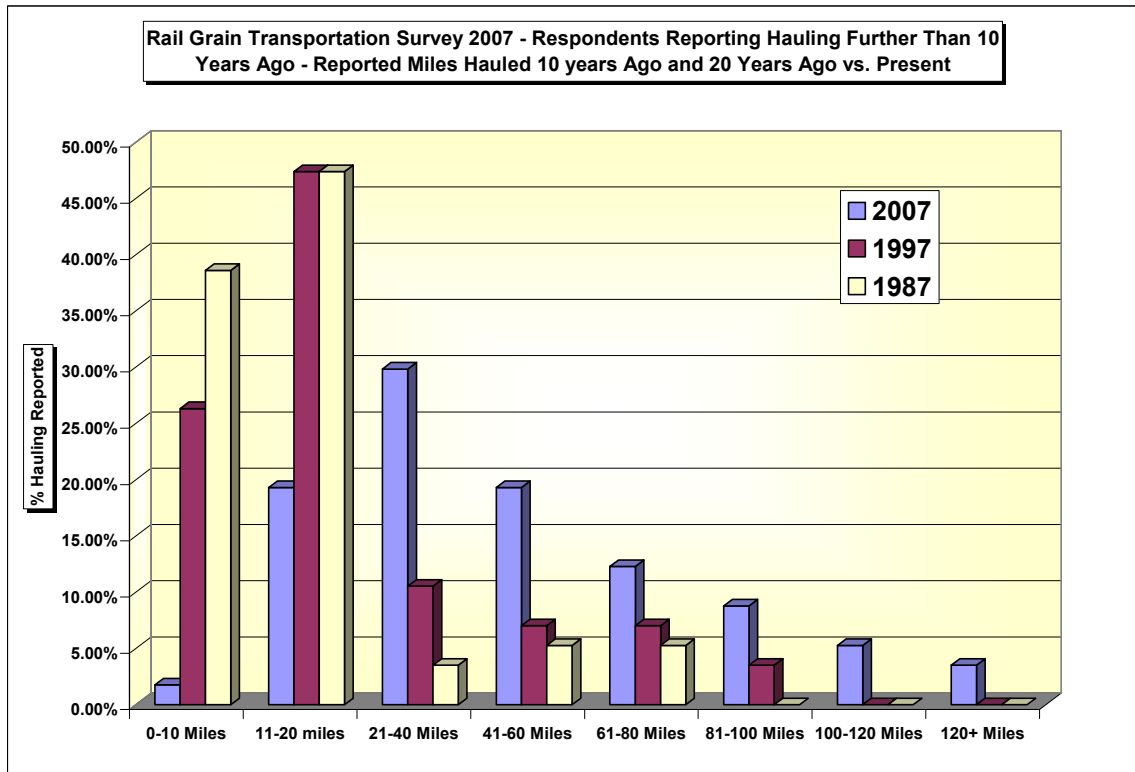
The evidence contained in the study shows the cost to the Montana grain producers and the Montana governmental entities are simultaneously rising with the transfer of costs and burdens from the private railroad sector to the public sector and the farm producers.

Over 72% of the initial farm hauls occur in Farm trucks with about 23% occurring in Commercial trucks (see below). Farm trucks are generally smaller capacity vehicles, requiring repetitive trips to move a farmer's crop to an elevator for rail shipment and quite often involve farm labor cost inputs. Longer and more frequent hauls mean a greater investment in labor, fuel and truck costs. However, in conversations with many farm producers, as the farm movements occur in commercial haulers, there is less farm labor involved in driv-

ing/waiting/loading/unloading activities freeing up that farm labor for the harvest-
ing/planting activities.

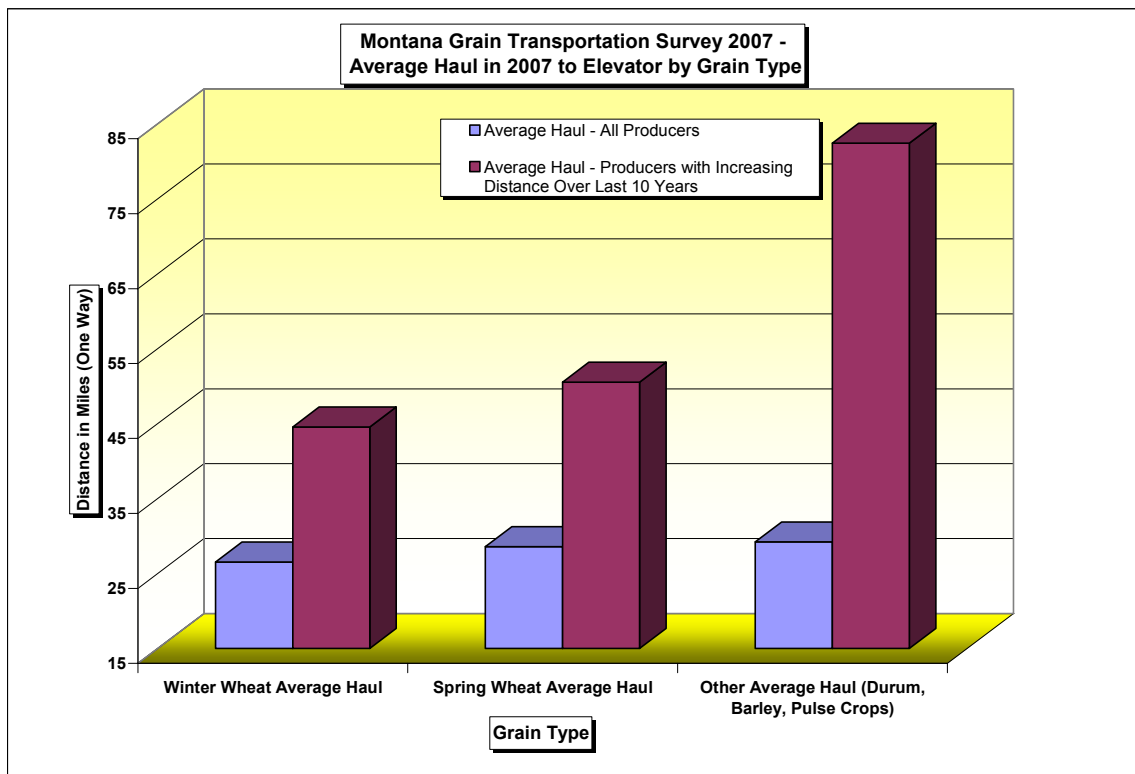


The crop percent overlaid by the average hauling distances confirms that the hauling distances are continuing to spiral upward as evidenced in the 2006 and 2007 Montana Grain Transportation Survey.

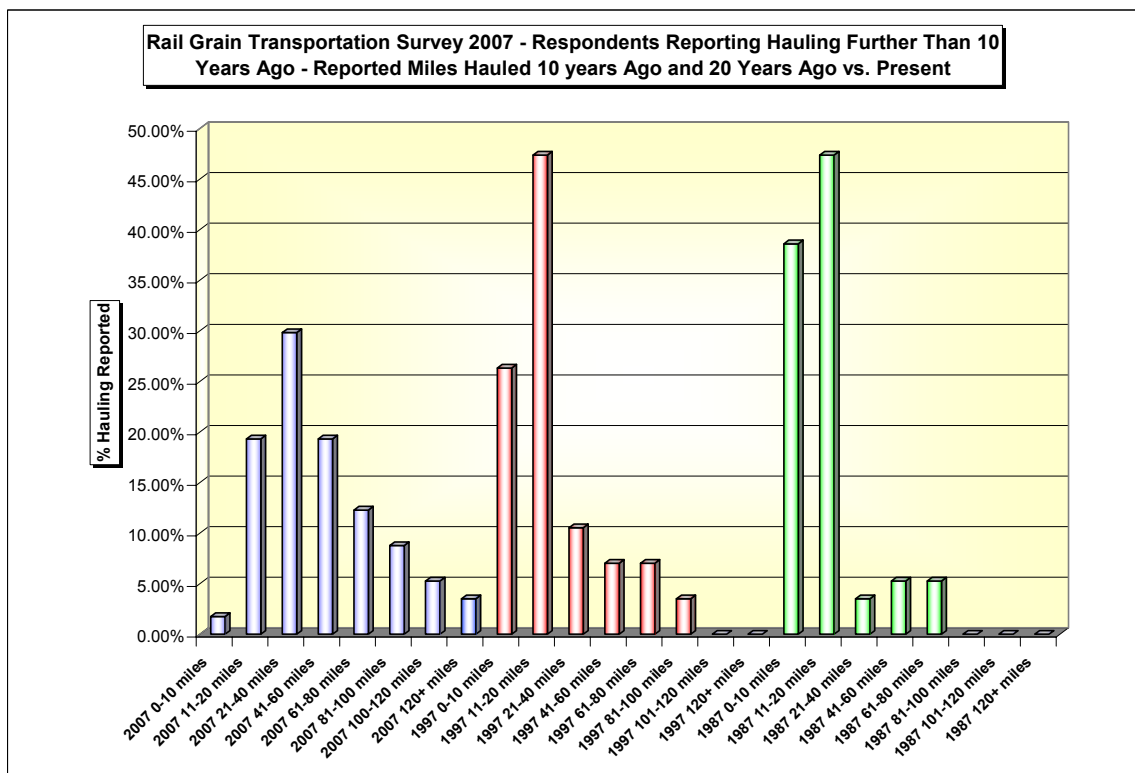
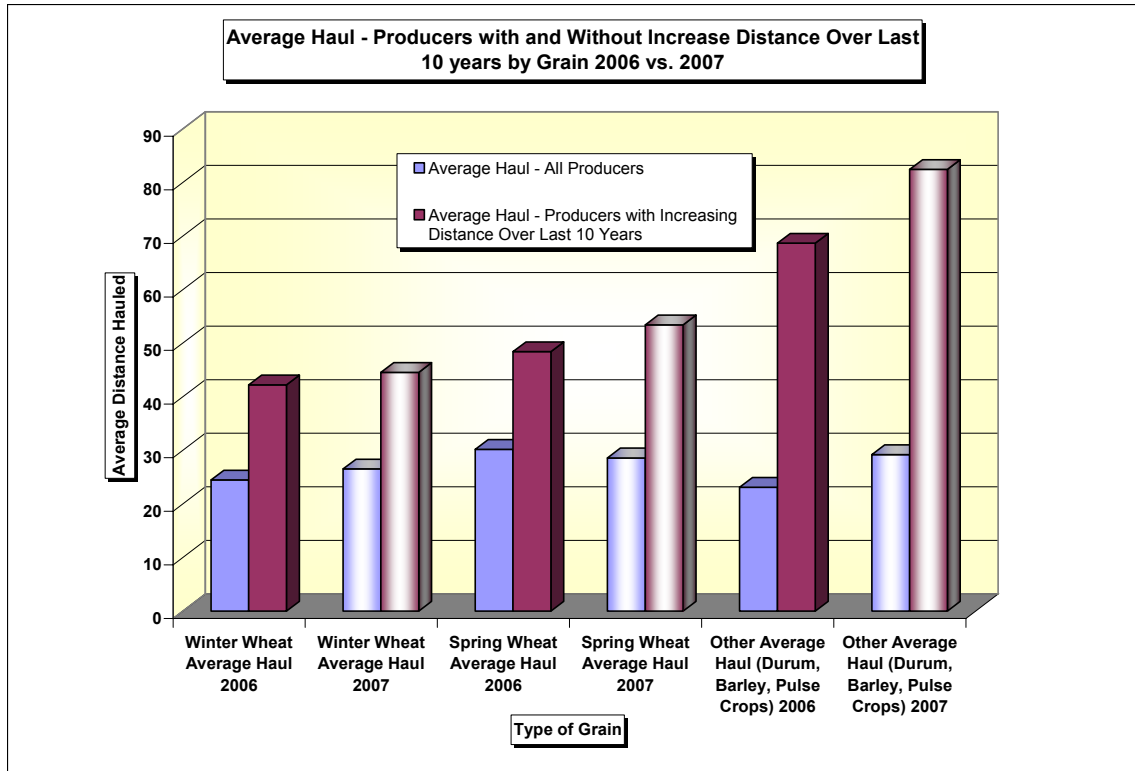


As the railroads move the grain industry to shuttle elevators and away from single, 26 car and 52 car loading facilities, the grain elevators to which producers need to haul their grain are becoming ever more distant, especially in the specialty and pulse crop markets. These increased costs of gathering are being shifted to the farm producers and the state and local highways in virtually every mileage block looked at in the study.

One of the most important findings of the study centers on the graph below. The farm producers reporting increases in hauling distances over the last 10 or 20 years are showing current average hauls much higher than farm producers who are still able to use nearby elevators. It is clear that the burdens and costs of increased hauling are not falling on every producer equally but are concentrated most heavily on those who have lost access to local elevators are thus more captive.



The graph below breaks out by mileage blocks and by year the average hauling distances, allowing the study to look at the individual components that make up the increasing distances hauling.

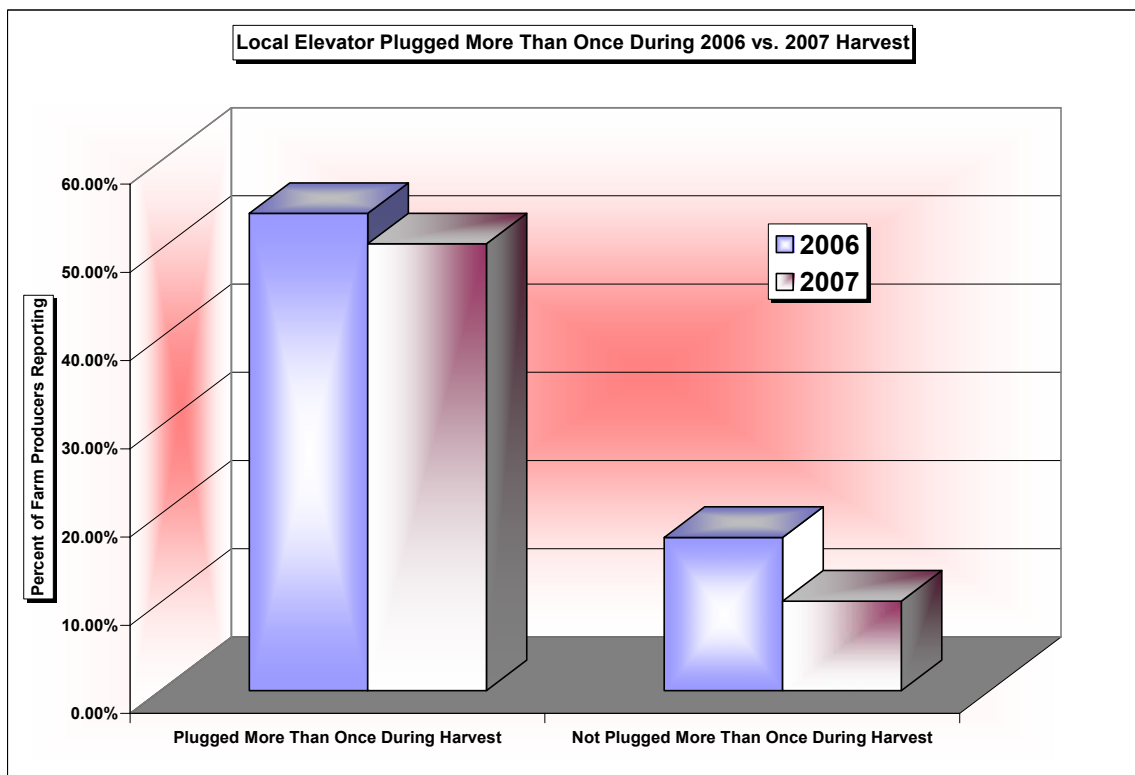
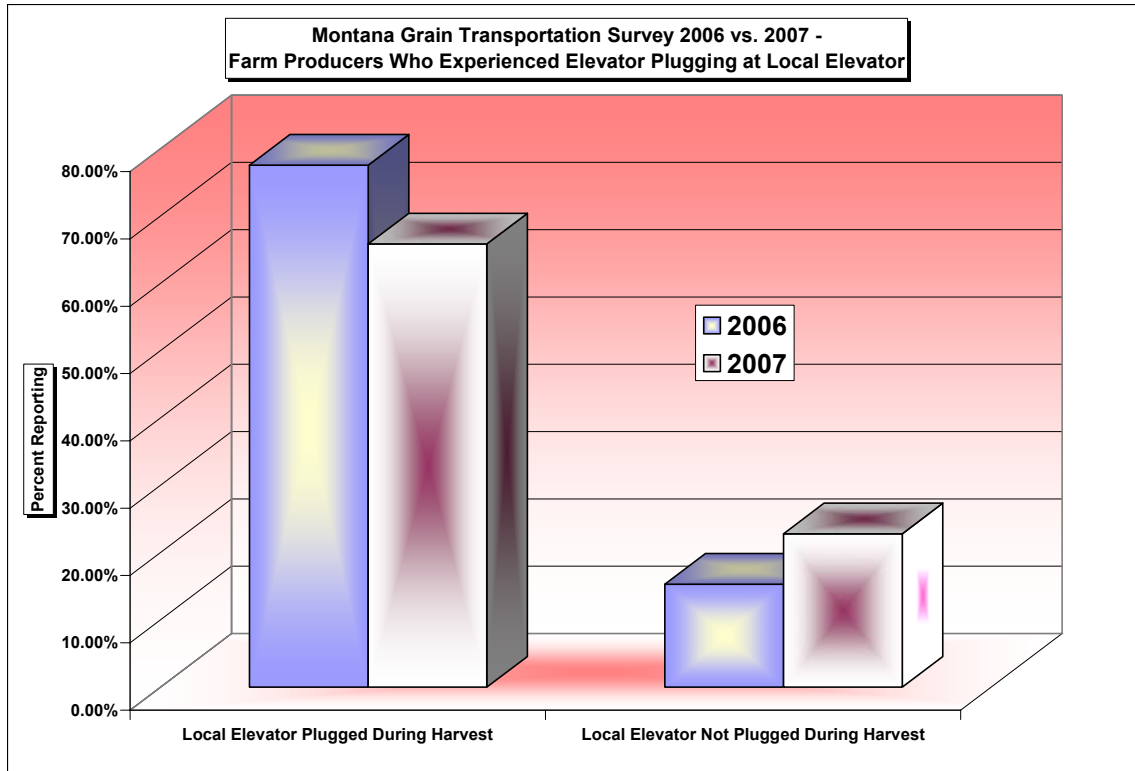


One RSCC member during the draft review of the 2006 Montana Rail Grain Transportation study commented, “as the survey showed drastic increases in distance to haul products, the cost of increased traffic on the highways and maintenance to the highway can now be calculated. There is now a definite connection between a profitable railroad and a shift to state government road maintenance.” This Montana Rail Grain Transportation 2007 study provides year over year confirmation of the actual trends and quantification of the shift to State and Rural highways for ever increasing highway hauls to market grain.

A second comment by a RSCC member in the 2007 review of the Montana Rail Grain Transportation 2006 study was “that there is a tremendous risk to the producer that did not exist 20 years ago – in liability, truck driving, equipment, traffic safety, etc.”

VI. MOST OF THE MONTANA GRAIN PRODUCER RESPONDENTS REPORT EXPERIENCING MULTIPLE PLUGGING OF THE ELEVATORS ALTHOUGH THE PLUGGINGS WERE LESS THAN 2006

Over 65% of the grain producers responding to the survey reported experiencing elevator plugging during the harvest. This number was down from 78% in the 2006 Survey – showing improvement (i.e. less disruption) in the disruptions that plagued the 2006 harvest.



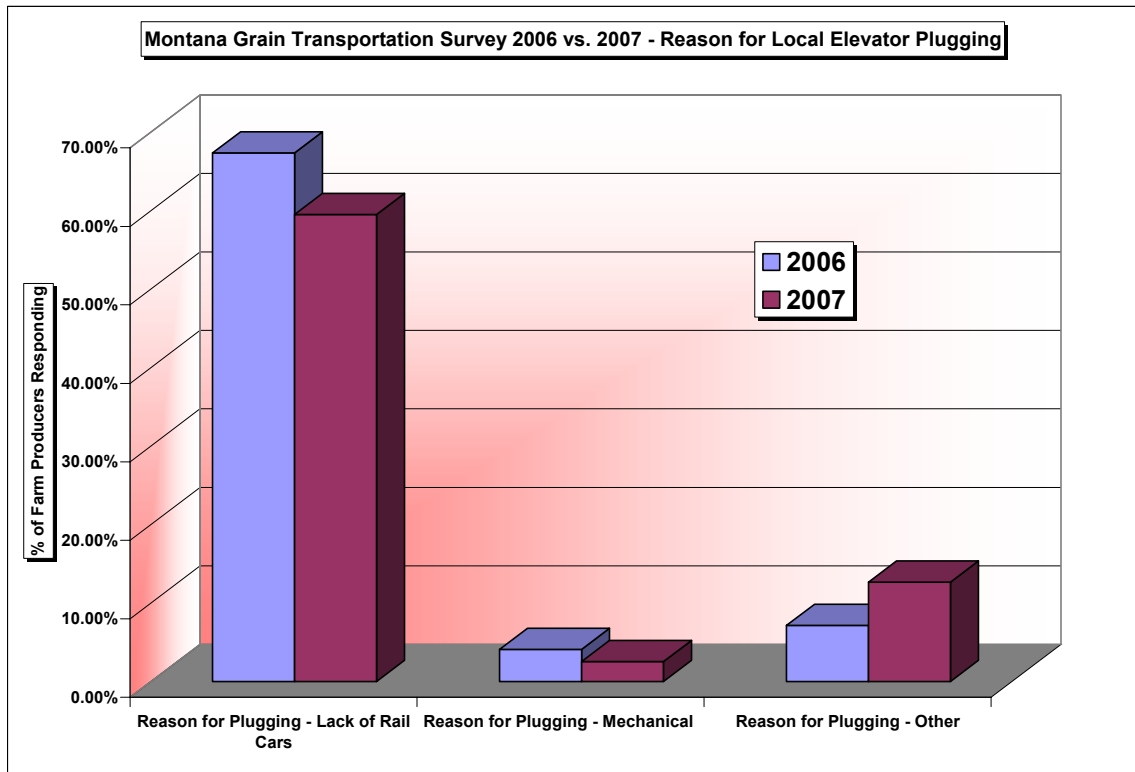
The Montana harvest comes at the end of the U. S. harvest cycle, due to the State's northern location, and the major harvest movements usually occurs prior to the corn movements to Seattle which tend to occur in the early part of the year.

Over 50% of those grain producers reporting elevator plugging during the 2007 harvest saw multiple pluggings during the harvest season and again this number was down from 54% in the 2006 survey.

Over 67% of the grain producers reported that the major reason for the plugged elevators was lack of rail cars. That, in turn, may be in part a function of other carrier issues such as lack of locomotive power or ordering patterns by grain elevators. In conversations with elevators and railroads, the study found that each party focused on the other as the cause for the lack of rail cars available to move the grain. Thus, it may be that the grain producers are concluding that the pluggings are occurring due to 'lack of rail cars' due in part to conclusions drawn from the conversations with their grain elevators or merchandisers. The railroads point to elevator pluggings as a function of grain elevators not ordering cars in time and not anticipating the grain coming into the elevator. The railroads point out that they are at the mercy of the elevator companies on this issue. Importantly for the producer, the railroads are talking to the grain companies and seeking increased grower input about their plans and appear to be doing more outreach about planning for each harvest campaign.

It is troubling to see the railroads blame the elevators and grain companies, and the grain companies point their finger at the railroads – for the producer

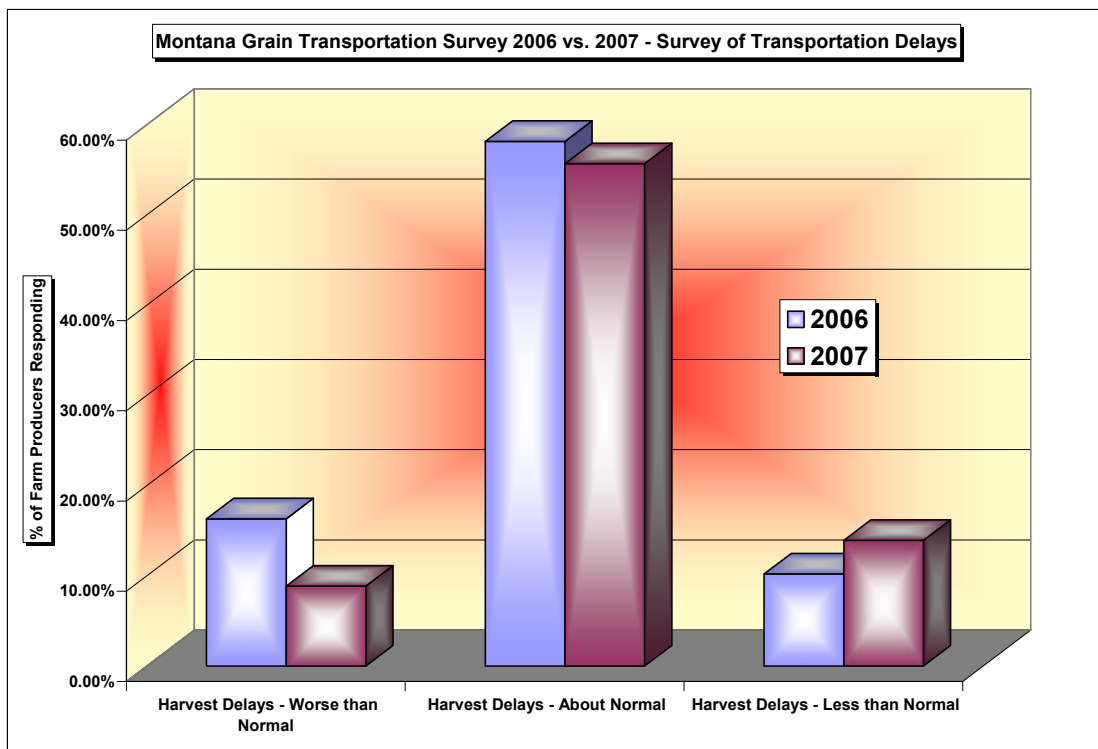
is the one that ultimately pays for delays. While a farm producer may conclude that one or the other are to blame, it is likely that the future solutions revolve around both parties working together.



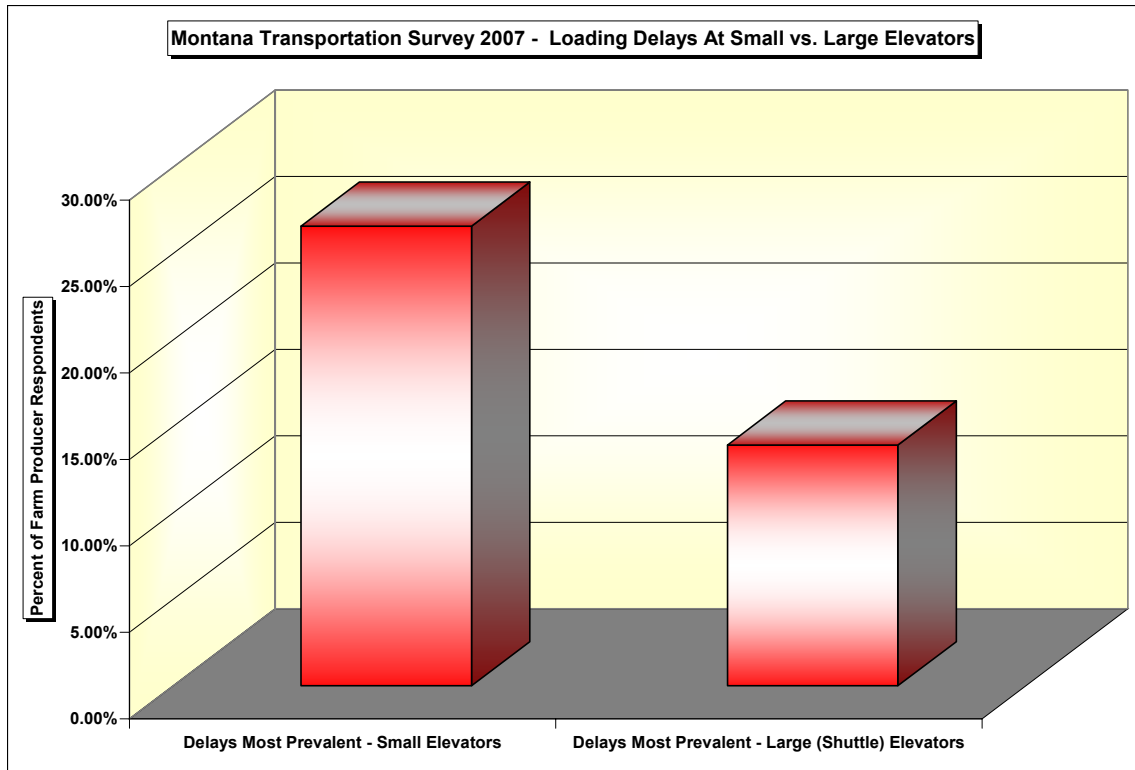
Although these results are evidence of disruptive problems, the farm producers responding to the survey continue to feel that their disruptive service with multiple elevator pluggings was essentially "business as usual" for the railroad and the grain industry. It continues to be curious that inconsistent service appears to be the norm to those who pay some of the highest, most profitable transportation rates in the nation – a fact confirmed by the GAO 2006 study of rail competition. It should also be noted that the 14% of the respondents in the 2007 Survey felt that the delays were less than normal compared to 10% in the 2006 Survey.

It is understandable that railroads do not keep a car supply on hand to meet system-wide peak demands, however by the time the Montana harvest occurs (August-September), wheat harvests in the southern plains states are over and corn movements have not started in earnest.

Many comments accompanied the survey returns and while space does not allow for a complete listing, there continues to be frustration with rail transportation in general, the lack of Surface Transportation Board oversight and attention to Montana's captivity problems. The grain industry was singled out in a number of responses, suggesting insensitivity to grower issues. This may reflect response to a campaign by some growers partially supplemented by the railroads pointing at the grain industry for its lack of transparency in farmer-grain company transactions.

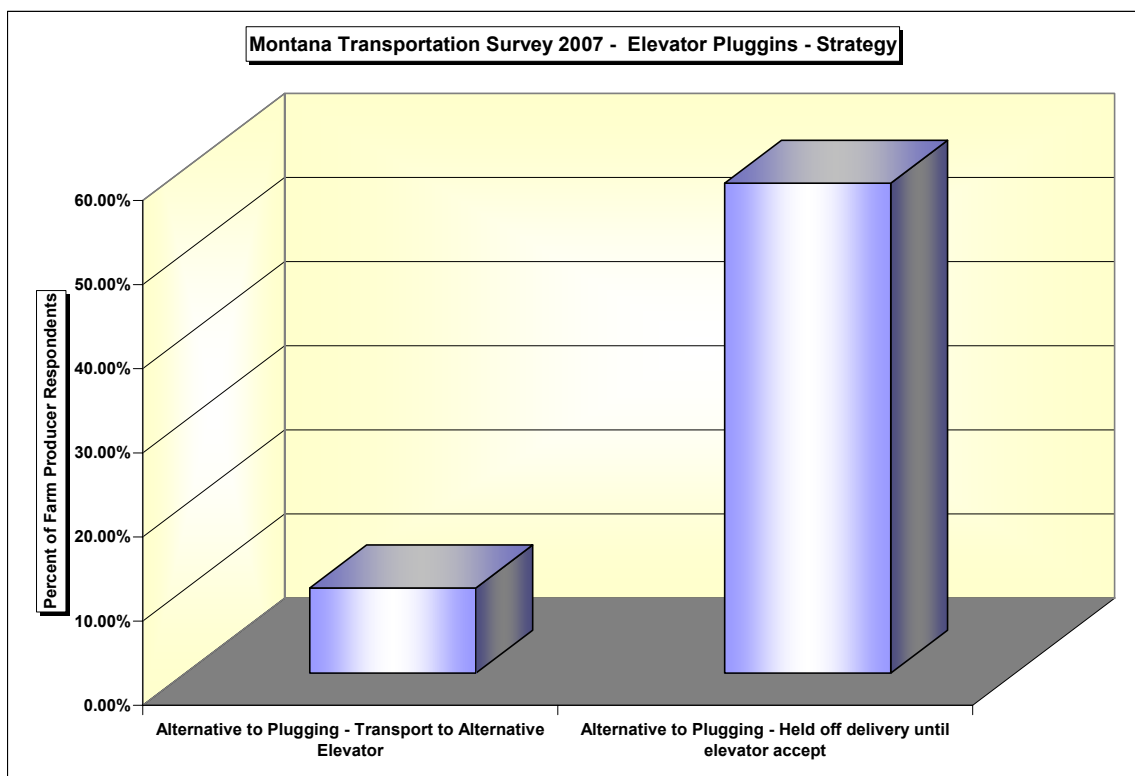


The preliminary results already show that farm-to-rail costs are continuing to increase and that railroads may be achieving their own internal operating efficiencies through railroad and grain company investments which are in large part paid for by the farm and public sectors. Some areas are experiencing truck hauls of over 100 miles one way to deliver grain to an elevator.

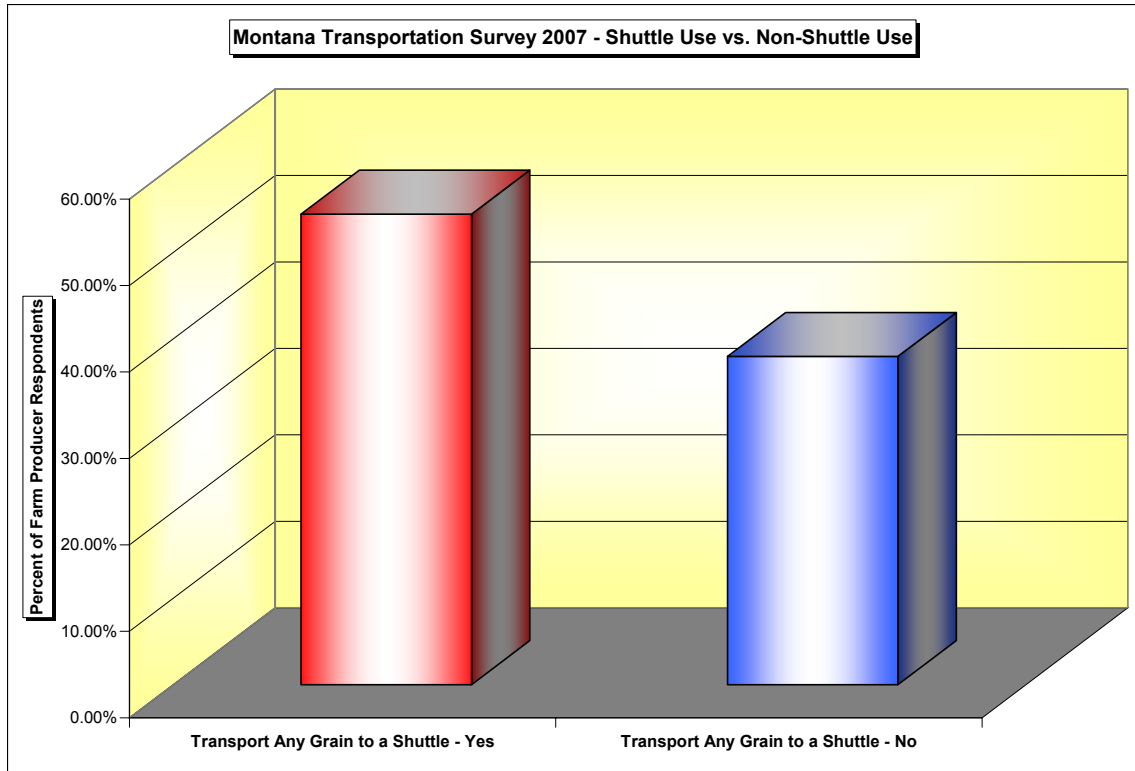


Car shortages occur more frequently at non-shuttle origins than at shuttle elevators according to survey respondents, which provided another forced inducement for grain producers to use carrier-preferred shuttle elevators. The resulting delays create powerful incentives for shifts of grain to shuttle elevators, because farm producers depend for their livelihood on a crop produced once a year, and the price for that crop can fall dramatically when delivery opportunities are missed due to poor or delayed rail service.

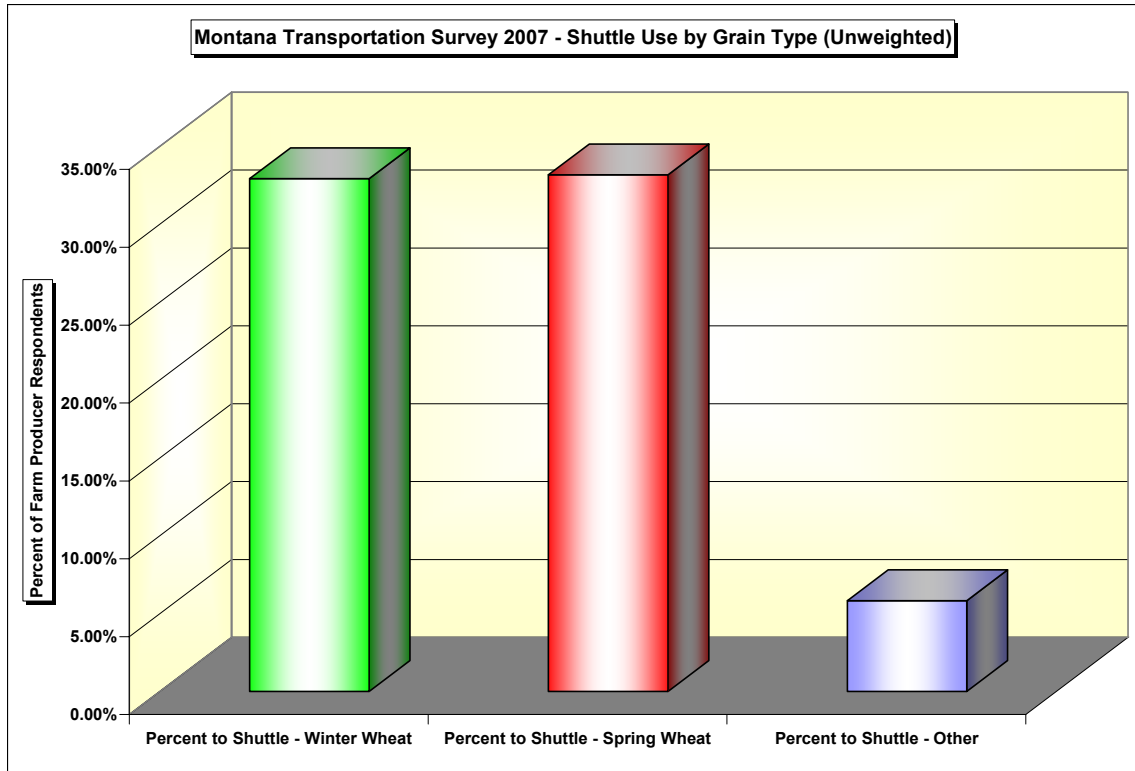
The long distances to alternative elevators meant that, over 58.4% of the time, farm producers held onto their grain and waited for railroad cars to arrive so the elevator could be unplugged. This was a marked change from the 2006 where over 90% of the farm producers responding, held onto their grain and waited for the elevator to get unplugged. It appears in 2007 farm producers were willing to move their destination grain sales to alternate elevators more often than in 2006 to complete the sale of their grain. This may have reflected the relatively high prices being paid for wheat in the fall of 2007.



The survey was expanded this year to seek out activities about the farm producer respondent's use of shuttle facilities. About 54% of the respondents transported some of their grain to a shuttle facility.

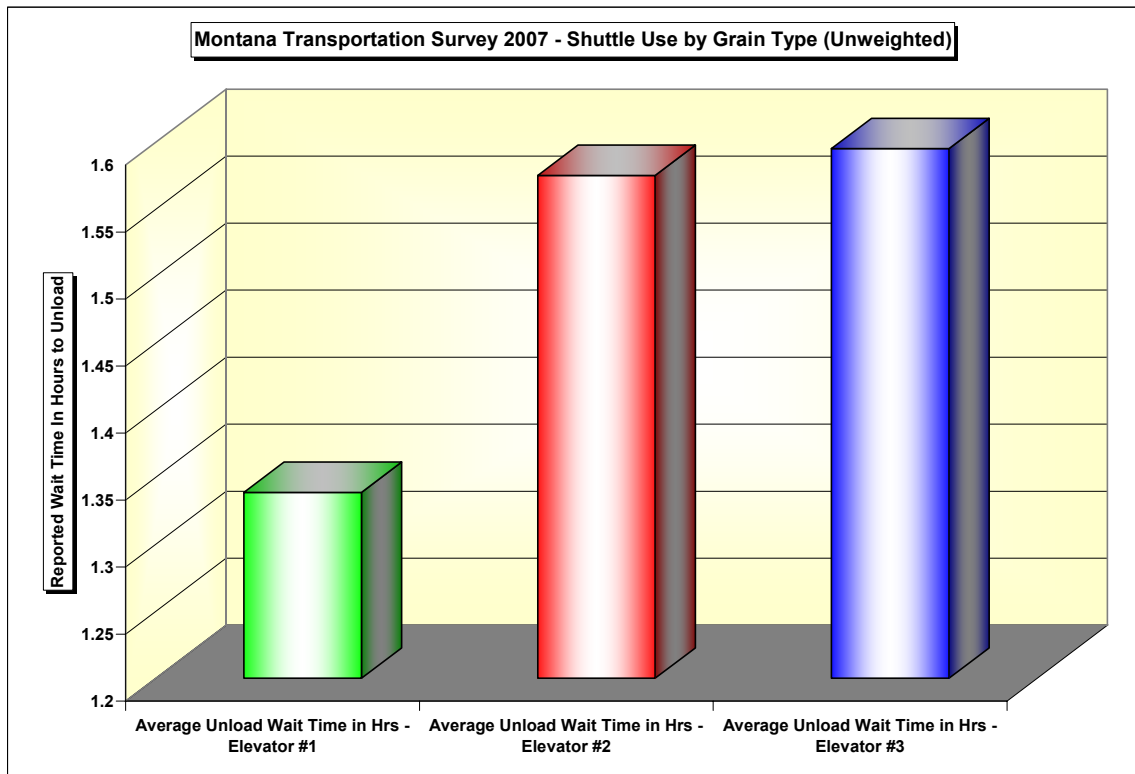


When the survey questioned whether a farm producer utilized a shuttle facility for marketing some of their grain, just over 30% of the winter and spring wheat respondents indicated they utilized for a shuttle facility for at least part of their production.

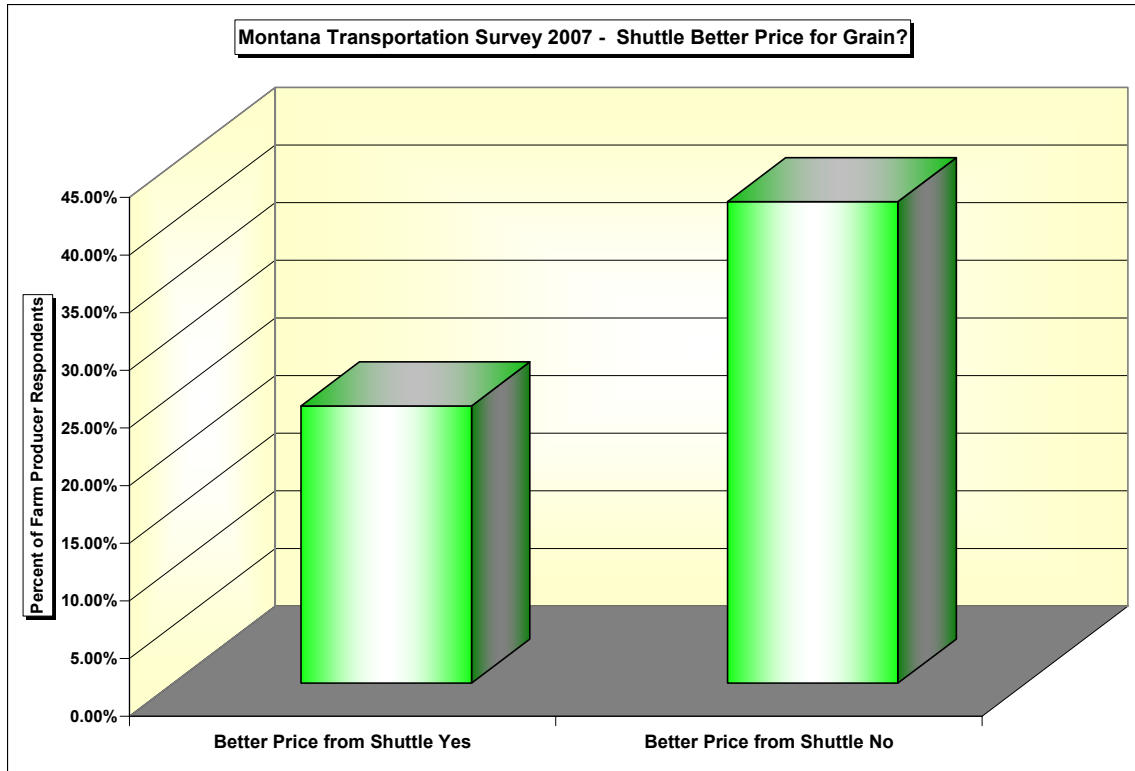


One of the questions asked by a Rail Service Competition Council member during review of the 2006 draft report was, “Do longer hauls result because of the search for a better price or because of fewer elevators.” In the 2007 Survey questions were included to ascertain the specific reason. First, the survey looked at the average wait times to unload at the primary versus the alternative elevator location where they existed. Clearly the primary elevator has quicker unload

times than alternative elevators.

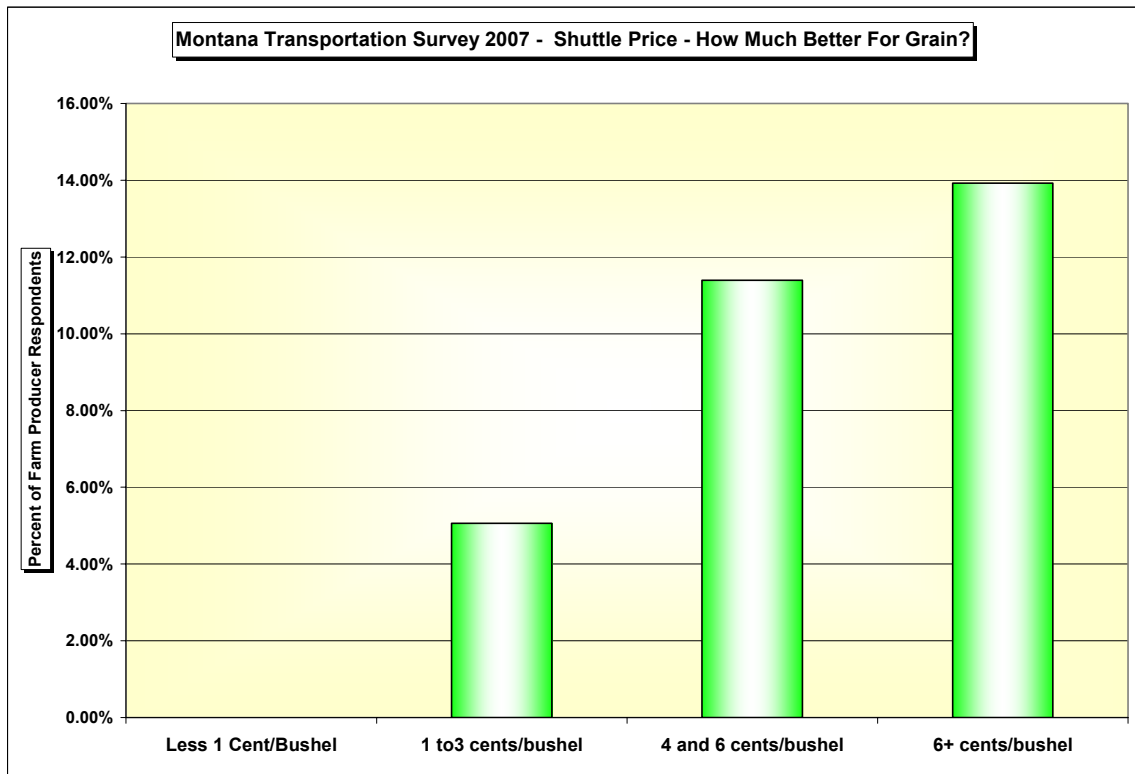


However, when the survey asked whether the Shuttle facilities offered better price for grain the results show that most of the respondent farm producers did not feel that shuttle were offering a better price for their grain. This is a surprising result of the study. The traditional thinking is that shuttles with their lower freight rates and incentives for loading, can afford to offer a better price (due to lower costs) for the grain it is buying, thereby attracting a large pool of grain.



However, this study suggests, that farm producers responding to this study do not feel the shuttle system is offering a higher price for their grain. This would suggest that farm producers may be weighing the cost of increased transport to a shuttle facility which more than offset the higher price offered by the shuttle.

Does that increase price offset additional trucking costs? In the survey, the question was asked about the costs associated with movement to the shuttle facility in cents/bushel and the respondent farm producers indicated the average was about 5.14 ¢/bushel with a high of 25 ¢/bushel. When that average 5.14 ¢/bushel is compared with the fact that only 13% of the respondents reported receiving 6+ ¢/bushel higher for transport to a shuttle – it appears that the majority of respondents felt they were not receiving sufficient price incentive from the shuttle facilities to offset their increased transport costs.



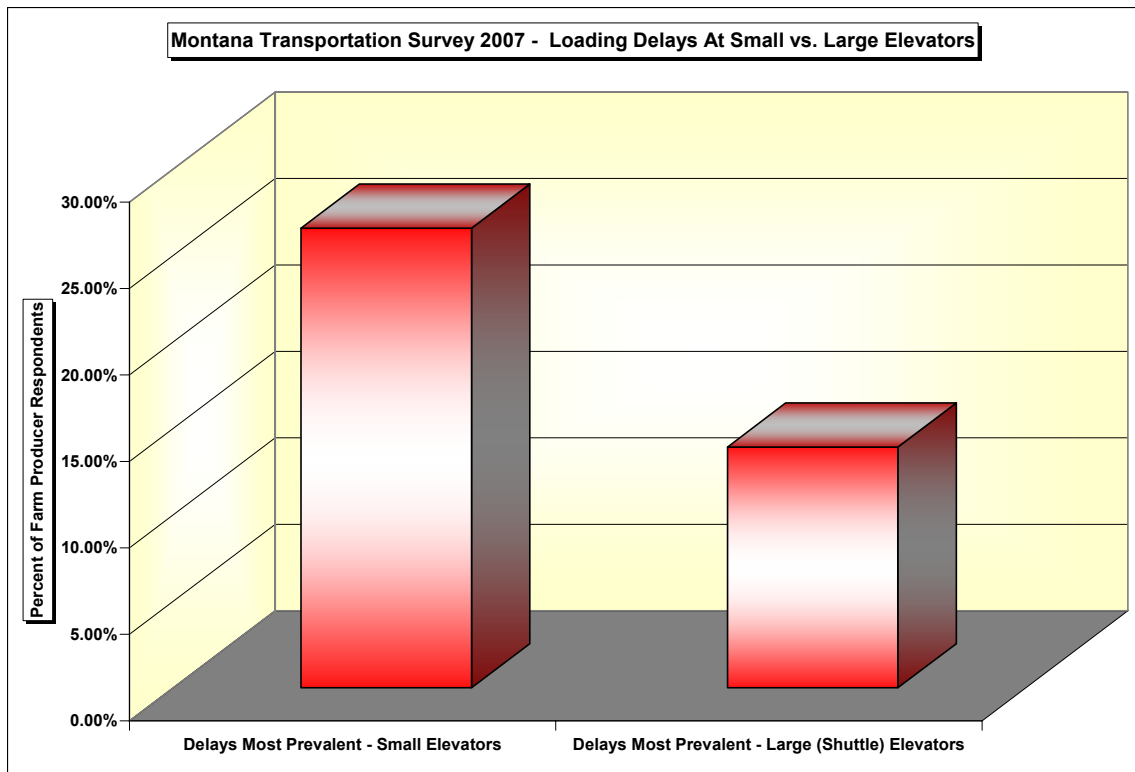
Clearly it would be interesting to know if there are reasons other than price, operational efficiency, or non-plugged condition that would drive grain traffic to a shuttle over a local facility.

The traditional thinking is that a higher offering price will move traffic to a shuttle facility away from a smaller facility, however, the survey indicates that even in a few cases, where the price to relocate to a shuttle facility may be less than the costs associated with relocation to that facility, the farm producer may continue to utilize the facility.

In a majority of farm producers responses, when a main elevator cannot accept additional grain (51% experienced multiple pluggings), rather than shop

(price or availability) over 58% of the respondents indicated they “hold off waiting for the elevator” to be able to accept additional grain.

Thus, in most farm producer’s situations, the availability of viable alternatives to the main source elevator whether it be price or demand driven is not an option.



The study results show a strong correlation between the loss of elevator choice (down over 35% in number since 1984) and the distances driven (up 70% for winter wheat, up 77% for spring wheat and up 182% for other crops in last 20 years). About 72% of farm producers reporting indicated increased hauling distances for their grain in 2007 over 1997.

The smaller elevators were reportedly twice as likely (26.5%) to have delays as the larger elevators (13.9%).

While the railroads frequently cite statistics showing "decreasing or constant rail rates (not including fuel surcharges)," here in Montana such rate actions may appear, from the farm producers standpoint, to be partially or completely offset by escalating cost shifting from railroads to farm producers and state/local governments.

VII. DISCUSSION - Impacts of Shuttle Train Rate Structures On Grain Elevator System, and Including Highway Costs.

Railroads find it more efficient in transporting grain to operate large (100 to 110 car) shuttle trains than to operate smaller units, such as 26-car trains (increased throughput, lower dwell times, decreased turnaround times, etc.). An increasing portion of wheat, which is the principal crop in the Great Plains and the Pacific Northwest, is moving in shuttle train service. There is no doubt that the shuttle concept provides for more efficiency for the railroad and for the elevator company that operates the origin shuttle elevator (due to payments back to the facility by the railroads). However, this trend has decidedly negative impacts on other important segments of the various state economies, as well as on the State of Montana. Costs which are not factored into every day grain transaction, but they are real costs – costs which both the taxpayers and public must endure.

A grain train shuttle origin requires special investments of a significant nature in order to realize the maximum economies from shuttle train service. The

freight rate applicable to a shuttle train is lower than the freight rate applicable to a similar-sized ordinary unit train for which a shipper makes no repetitive shuttle train operating commitment. Freight rate reductions for shuttle trains become more pronounced if the shipper commits itself to operate the shuttle train for an extended period of time, as provided in BNSF's tariff (Origin and Destination Efficiency Programs – rebates to facility). A shipper will not undertake such a commitment without access to origin and destination elevator facilities that can meet the specially-tailored operating conditions under which shuttle trains can receive even further reduced rates.

The grain shuttle train economic incentives offered by BNSF Railway, the primary carrier serving Montana, include a payment of \$150.00 per car if the shuttle train is loaded at origin within 10 hours (\$100 per car if loaded in 15 hours and a \$50/car if over the 15 hour limit), and an additional \$100.00 per car at destination if it is unloaded within 15 hours. Those two discounts alone amount up to \$27,500 per 110-car shuttle train. When the shuttle train rate discount itself is added, the total discount available to a wheat shuttle train operating from a Montana origin to a port at the Pacific Northwest (the most common destination for Montana wheat) can be over \$60,000 per train, which is the equivalent of about \$0.16 per bushel compared to the rates paid by an elevator shipping 52-car units. The spread favoring shuttles is even greater for an elevator shipping 26 cars at rates exceeding those for 52 car shipments.

The \$ 0.16 per bushel advantage available to wheat shuttle train shippers does not come without a cost to the elevator, farming, and governmental com-

munities in Montana. In order to load the wheat shuttle train within 10-15 hours, as necessary to earn the per car rapid loading discount, the origin elevator has to equip itself with high speed loading equipment and tracks long enough to accommodate the shuttle train without interrupting the loading process for switching. These alterations to an existing facility are estimated to cost several million dollars, excluding the cost to acquire any additional land that may be required for the shuttle train expansion. In some cases the BNSF is believed to be defraying some of the costs incurred by some elevators for their investment in track and shuttle infrastructure. Of course, if a new facility is built to handle wheat shuttle trains, the land, track, and elevator equipment costs to satisfy the shuttle program requirements likewise add many millions of dollars to the investment. The positive side to this movement is increased efficiency of movement – thus lower costs of transportation.

Elevators that invest in shuttle train loading facilities generally are rewarded in one of two ways, or perhaps in both ways. First, if the origin carrier wants to provide an inducement for the construction of a shuttle loading facility, it can offer to contribute to the shuttle loading construction costs. This may have been the case at several shuttle origins in Montana. When this occurs, the elevator must be enlarged or built at a location agreeable to the railroad and the construction assistance will take the form of a rebate or discount per carload shipped, sometimes after the elevator meets a minimum shipping requirement annually. Such refunds normally cease after a certain number of years or when a maximum agreed contribution has been made by the carrier.

A longer term economic advantage to the shuttle elevator flows from the rate advantage afforded by the shuttle program when compared with rates available to other elevators that are vying for the same origin wheat production. The shuttle elevator operator maximizes the benefits of the shuttle facility by putting as much wheat through it as possible, not only to earn any volume-based rebates that the origin carrier may offer, but also to earn the margins that the market offers on wheat trades.

One might wonder why it is that a smaller grain elevator would seemingly stand idly by while another company invested in nearby shuttle-loading capacity. The answer often lies with the railroad, which is not willing to subsidize shuttle elevator construction costs for two competitive facilities when just one can meet the carrier's anticipated shuttle loading needs from that particular grain production area. The railroad may not stop the construction of a competitive shuttle origin facility, but its unwillingness to contribute to the construction costs through rate refunds or track allowances places the subsidized origin facility at a distinct advantage.

Because the ground in Montana simply does not yield enough wheat to support two high-speed, high-volume loading facilities that are situated in relatively close proximity, the elevator with a railroad-furnished subsidy has an advantage that deters the construction of a competitive shuttle loader. The effect of these actions by the railroad in assisting some elevators but not all contributes to what is called "forced sourcing" in the industry. Forced sourcing is not just lim-

ited to agricultural movements but is found in coal, chemicals and other industries as well.

To attract large volumes of wheat, the shuttle operator may well offer the farmer a better price for wheat delivered to the elevator than the price being offered by a competitive facility (see study results above) that does not have the lower shuttle rates available. As indicated, the competitive advantage provided by the shuttle program may be as much as \$ 0.15 -\$0.20 per bushel excluding Origin and Destination Incentive rebates, which is a very significant amount in the marketplace. An elevator that has a \$ 0.15 -\$0.20 per bushel advantage over a competitor is well positioned to attract a great deal of wheat away from that competitor by offering a higher price to farmers who are willing to deliver that wheat to the shuttle facility.

The shuttle system may appear beneficial for the shuttle elevator and for the farmer delivering wheat to that elevator, but these benefits may be illusory, at least for many farm producers. Although the shuttle elevator may offer a better price for delivering wheat than a smaller, non-shuttle elevator, the farmer selling to the larger elevator that is not located very close to the shuttle facility, in all likelihood, will have a greater cost to get that wheat to the elevator than would be incurred if the wheat could just be delivered in a normal farm truck to a local, smaller grain elevator as outlined in the studies above. That does not suggest that high-efficiency shuttle type elevators aren't the state of the art and should be encouraged. The fact is that some of the costs moving to this new high speed efficient system is borne by the farm producer and the public in the form of in-

creased highway costs. Some of the costs being shed by the railroads and grain companies are showing up as increased costs for the farm community.

Shuttle elevators require much longer truck trips for many farmers covering their large drawing area. When farmers sell to a nearby local elevator, they generally use their farm trucks to deliver the wheat to the elevator, making as many of the short trips as it takes. Wheat is not a dense grain. In Montana, the average yield is approximately 35 bushels per acre. Thus, for each 110-car wheat shuttle train, at approximately 3,750 bushels per car, some 412,000 bushels of wheat must be delivered to the elevator. (These figures disclose why competition between shuttle elevators for the same acreage output is a daunting gamble and why a single shuttle elevator may tend, of necessity, to dominate an entire growing region.) Just 10 shuttle trains a year consume over 4 million bushels of wheat. It takes some 114,000 producing acres to produce such a quantity, and that acreage may spread out over a radius of up to 50-100 miles.

This data illustrates why there is a significant cost attached to delivering wheat to a shuttle facility. Because shuttle facilities are distant from each other for many farmers, the trip to a shuttle elevator is longer and more expensive for the average wheat farmer, as shown by the 2006 and 2007 Montana Rail Grain Transportation Survey. These longer trips have several economic consequences.

First, they require more man-hours of farm labor if the farmer's own truck is used, which has a cost to the farmer. Based upon the 2007 Montana Rail Grain Transportation Survey, 72% of the movements are in the farm trucks.

Second, they require investments by farmers in larger trucks. More and more farmers are being forced to invest in full-size, 18-wheel trucks (which are still classified in the study as farm trucks – owned by farm producer) to move grain from the farm to the shuttle elevator in order to avoid a multiplicity of trips in smaller farm trucks. If a farmer chooses not to make the larger truck investment directly, and hires a trucker, the cost exists nevertheless. Third, the longer trips require the purchase of more truck fuel. While these types of costs fall more heavily on farmers who live a greater distance from the shuttle elevator than those fortunate enough to live nearby, on average the farming community is paying more to get wheat to a shuttle elevator than it did to get wheat to a local elevator that shipped smaller units.

Because the shuttle elevator has a strong economic incentive to attract as much wheat as possible, it will bid enough to the farmer to compensate for the expenses of moving wheat to the larger elevator, but the benefit to the farmer stops there. The shuttle elevator understandably will offer no higher a bid to the farmer than is necessary to induce the movement of grain to the shuttle elevator, and will tend to keep for itself whatever other profits are derived from the lower shuttle rate structure unless and until forced by other market considerations to act otherwise. This is not a criticism of the shuttle elevator but a fact in the market place. Thus lower shuttle rates do not necessarily result in a significantly higher farm income even when elevator bids to farmers are increased by the shuttle loader, because the increased bids tend to offset by increased farmer costs.

The party likely to suffer most in the short term from the railroad's preference for a shuttle rate structure is the community as a whole and its governmental subdivisions. To make the shuttle network function efficiently for the benefit of the railroad, it is indisputable that grain must travel longer distances in heavier trucks over state and county roads (see study results above). These increased road burdens come at a substantial cost to local government and all taxpayers.

Of course, any increase in State expenses due to increased hauling to ever more distant elevators will be reflected ultimately in increased state and local taxes. Collectively, these costs represent a real transfer of wealth from state and public treasuries to the railroad, which is the primary beneficiary of the shuttle program. What is occurring in Montana is that rail service in its quest for more efficiency appears to be increasing more traffic on highways.

VIII. WHAT WILL HAPPEN WHEN THE RAILROAD SPONSORED SHUTTLE PROGRAM IS EFFECTIVE IN ELIMINATING THE NON-SHUTTLE ELEVATOR FACILITIES?

In the short run, the shuttle elevator appears to be a beneficiary of the shuttle train program. But its advantages stem to a great extent from the rate relationship between shuttle rates and those applicable to smaller units, a differential that enables the shuttle elevator to outbid the non-shuttle elevator, based on lower relative rail rates. Eventually, however, and probably in the not too distant future, the highly successful BNSF shuttle program will drive the smaller elevators entirely out of business, especially as rail service seems to be more available for shuttle than for other services according to the survey. With their de-

mise, there no longer will be rail service for less-than-shuttle quantities of wheat and other crops such as barley, peas, lentils and other pulse crops that depend on small elevators to market and move their commodities in small shipment quantities. Additionally, many smaller elevators handle inbound fertilizer movements.

The only wheat rate in the marketplace will be the shuttle rate, and there no longer will be any reason for the railroad to offer lower shuttle rates designed to attract wheat away from smaller elevators. The controlling railroad will be at liberty to raise its shuttle rates without any such constraint.

If shuttle origins have no other origin elevator competition, they will be under no origin market compulsion to offer reduced rates to farmers regardless of how far the farmer may have to truck wheat to the elevator. Normally, increased rail rates result in lower elevator bids to farmers. The long run result of a successful shuttle program that dominates or eliminates elevator competition in any growing area is a long run lower price (higher transportation price) to the farmer, even if the farmer gets a higher apparent price in the short run.

IX. THE POTENTIAL LOSS OF LESS THAN SHUTTLE ELEVATORS WILL ALSO RESULT IN THE LOSS OF MARKET WINDOWS FOR NON-WHEAT CROPS

The long term effects of the shuttle elevator program and the resulting elimination of smaller, less than shuttle load elevators will result in the potential loss of market windows for all of the other important crops grown as alternative or rotational crops on the dryland wheat farms in Montana and other states. **This is**

a major concern to the Montana farm organizations. It has already happened with Barley over the last 15 years, as shown in the *National Barley Growers Association* Opening Comments in Surface Transportation Board's proceeding entitled Ex Parte 665 – Rail Grain Transportation.

[http://www.stb.dot.gov/filings/all.nsf/457f7ba95a516a62852567d900574766/3504607b8f43872585257218004a03d7/\\$FILE/217992.PDF](http://www.stb.dot.gov/filings/all.nsf/457f7ba95a516a62852567d900574766/3504607b8f43872585257218004a03d7/$FILE/217992.PDF). The railroad program of forced sourcing wheat movements on the Great Plains and in the Pacific Northwest will lead to curtailment of alternative crop production and marketing. As outlined in the survey, railroads appear to be providing less overall transport capacity and power for small, non-shuttle grain shipments each year – a less railroad efficient movement. In turn, that curtails the farmers' ability to plant crops that are an alternative to wheat (or rotational crop), even when higher market prices for alternative crops are available or good land management practices suggest crop rotation. Reduced transport capacity and options, tend to lead to lower producer income because higher transport costs are borne by the producer.

X. U.S. GENERAL ACCOUNTING OFFICES ISSUES REPORT SHOWING CONCENTRATION OF RAIL POWER IN MONTANA

The U.S. General Accounting Office Report 07-94, *Industry Health Has Improved, but Concerns about Competition and Capacity Should Be Addressed*, [GAO-07-94,http://www.gao.gov/new.items/d0794.pdf](http://www.gao.gov/new.items/d0794.pdf) October 6, 2006 outlines the concentration of railroad power and expresses concern to the Surface Trans-

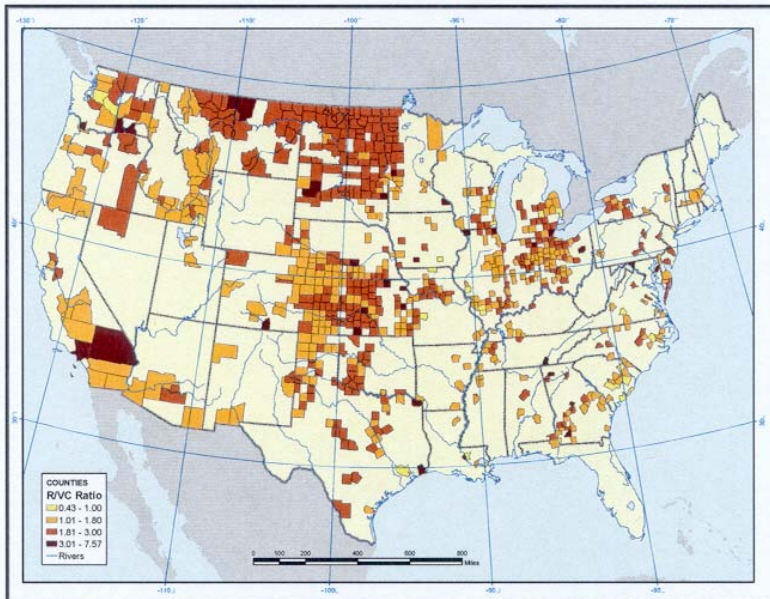
portation Board about the level of rail competition and the high level of freight rates in Montana.

XI. CHRISTENSEN REPORT CONFIRMS THE HIGH LEVEL OF RAIL RATES IN MONTANA.

The STB funded Christensen report (www.lrca.com/railroadstudy) issued in November, 2008 confirms the high level of rail rate levels in Montana – due to lack of competition (See chart ES-3 below)⁵. The study states that rails are generally exercising increased market power, “the exercise of market power appears to have increased in the freight railroad industry over the last twenty years but has been necessary in order to obtain revenue sufficiency.”

⁵ The Christensen Rail Competition Study, entitled, “A STUDY OF COMPETITION IN THE U.S.FREIGHT RAILROAD INDUSTRY AND ANALYSIS OF PROPOSALS THAT MIGHT ENHANCE COMPETITION” Page ES-38

**FIGURE ES-3
R/V C AVERAGES BY ORIGIN COUNTY FOR WHEAT SHIPMENTS
2001-2006 CARLOAD WAYBILL SAMPLE**



6

XI: RECENTLY ANNOUNCED PROPOSED SHUTTLE FACILITIES AT MOORE, MT

On March 23, 2007, the Great Falls Tribune carried an announcement by Peavey/ConAgra Foods at Moore, Montana indicating preliminary plans to expand its 52-car facility to a high-speed 110-car shuttle facility. This facility is being built as of the writing of this report and will be located in Fergus county approximately 20 miles from the United Harvest shuttle facility located at Moccasin. The proposed facility would be a straight line track terminal as opposed to the traditional circular track facilities. Peavey/ConAgra has continued development plans about the potential workarounds for road blockages, etc. Peavey/ConAgra has indicated that this facility will handle primarily wheat and possibly barley.

⁶ Ibid: Page ES-13

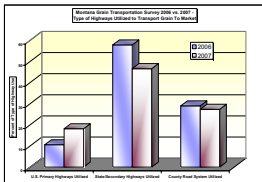
Additionally, in April, 2007, New Century Ag (New Century Ag is the result of a merger between Farmers Elevator Company of Fortuna headquartered in Fortuna, ND and Golden Plains Ag of Crosby, ND) located at Westby, Montana announced plans to construct a 100 car loading facility on the Dakota, Missouri Valley and Western RR at Westby, Montana in the NE corner. This facility is nearing completion. The DMVW railroad connects with the CP/SOO line and will provide movements east and west for the newly proposed facility.

SUMMARY AND CONCLUSIONS

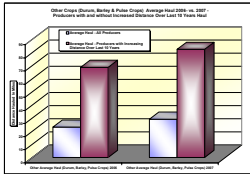
The Montana Rail Grain Transportation Survey and Study 2007 shows:

- Montana's Rail System is Shrinking
 - 1975: 5,100 miles
 - 2005: 3,200 miles
- Montana's Rail System is Dominated by One Class I Railroad (BNSF)
 - 94% of Montana's rail system-#1 in US
 - 91% of tons hauled
 - 92% of revenue
- Developing Trends
 - Increased short lining & potential abandonments
 - Transportation cost shifting from Railroads to Farm producer and State and local governments
 - Decreasing intermodal facilities
 - Decreasing number of grain elevators and marketing outlets for Montana agricultural crops
- Montana's Grain Elevator System Continues to Consolidate
 - In 1984, the Montana grain elevator system consisted of over 189 elevators. Most of the facilities in Montana were 52 and 26 car loading facilities with the rest being facilities that loaded single cars.
 - Today the state is served with 12 Grain Shuttle Facilities and about 109 single, 26 car and 52 car facilities.

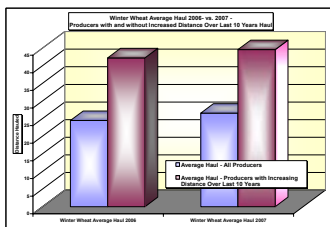
- Vast areas of the Montana have lost competitive service in ICC/STB approved mergers over the last thirty years;



- Grain is being hauled further and further over the state and county highway systems;

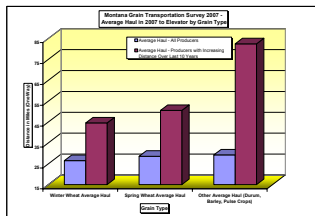


- The majority of farm producers have experienced increasing hauling distances over the past 10 and 20 years;



- Those farm producers experiencing increased haulage are hauling over 3 times as far as those farm producers who have not

experienced any increased hauling distances;

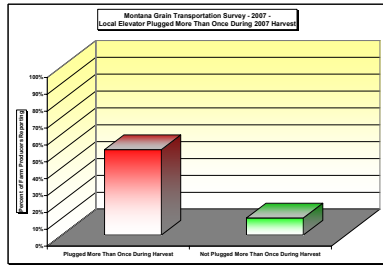


- The non-wheat crops are experiencing significantly greater hauling distances than wheat crops, further burdening alternative and

rotational crop practices;

- Some counties show average hauling distances upwards of 80+ miles;
- The vast majority of farm producers have the capabilities of storing most if not all of their grain production;

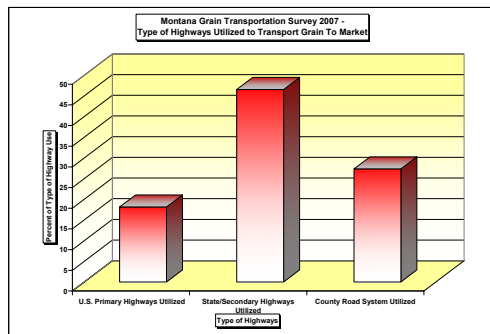
- Even with the diversity of yields, most Montana farm producers



experienced elevator pluggings multiple times during harvest – due, according to the respondents, as the lack of rail cars although 2007 – note:

Montana saw improvement over 2006;

- With the multiple elevator pluggings, a majority farm producers held onto to their crops and waited for the rail car shortages to abate rather than take their grain to more distant elevators;
- Farm producers generally thought these delays and elevator pluggings were ‘about average’ and par for the course but better than 2006;
- Farm producers are finding increasing unload delays at ever more distant elevators each year – unloading times up to 1.5 hours per trip;



- As the elevator system is being forced to larger, more rail efficient shuttles coupled with the loss of thousands of miles of rail branchlines in the state,

the costs of transportation for gathering grain seem to be shifting from the railroads to the farm producers and to the State and local highway system;

- The service levels in 2007 seem to improve over 2006 as the railroad continues to outreach to farm producers.

XII. CONCLUSION

Montana continues to experience high freight rate levels and forced sourcing practices throughout the growing areas of Montana for the purpose of facilitating operations that serves to provide efficiencies for and benefits to the railroad. Montana farm producers embrace the concepts of increasing efficiency in the marketing of grain, however it is equally important that marketing outlets for non-wheat crops be maintained in the state and that the railroad commits to provide reasonable rates and service levels to enable the marketing of non-wheat crops in the state. Montana farm producers are hauling further on State and County roads and facing the real prospect, in the not too distant future, Montana may have very few elevators in the system to serve the non-wheat crops and durum and their will be a diminishment in the competition levels in the grain elevator systems operating in the state.

The long-term effects of driving out the non-shuttle elevators, shifting the gathering costs to the farm producer, and additionally to the State and local governments will continue to create an economic burden on farm producers and state governments with the long-term result being higher taxes to support increased road use and potentially higher rail transport prices for Montana grain producers. While there may be a ray of hope that some competition may be developing within the shuttle facilities', with the announcement in the last year of the proposed shuttle facilities at Moore and Westby, the increasing loss of smaller elevators handling less than shuttle loads (alternative crops), is of continuing concern to the Montana farm producers.

2007 Harvest Rail Survey

Whiteside & Associates/ Montana Department of Transportation/Montana Wheat & Barley Committee

3203 Third Avenue North, Suite 301

Billings, MT 59101

Phone: 406-245-5132

Email: tw Whitesd@wtp.net

The 2007 Grain harvest in Montana encountered certain logistical problems! To help us better serve you and to assist in future planning efforts, we are conducting a survey of personal experiences that Montana farm producers and elevators encountered in their 2007 harvest experiences. This study will augment a similar study done in 2006 and provide two years of data to assist in developing solutions to logistic issues with Montana harvests.

The Montana Department of Transportation together with Whiteside & Associates of Billings, will be conducting this Harvest Rail Survey. This survey of the recent 2007 harvest will help identify logistical issues that both served to enhance the harvest rail movement and logistical issues that complicated and produced problems for the movement of this year's harvest.

Please complete this survey and return it to us at your convenience. We want you to know we appreciate your time and effort – it will help us all, help ourselves become more knowledgeable. The more responses the better the data collected. The results of the survey, once tabulated, will be available on the MT DOT website after completion and compilation. Thank you! We are requesting names and addresses in order to facilitate follow-up and to allow us to provide completed survey information to each of you. Your personal information will not be released in the public domain.

Name			
Address			
City, State, Zip			
County			
E-mail			
Phone			
Fax			
Please fill in and where necessary circle answer that best fits your farm situation			
County in which harvest occurred – if more than one county – please fill in.	1. _____	2. _____	3. _____
Was your 2007 harvest above average, near average or below? Please circle appropriate response for each crop group.	Above Average Winter Wheat Spring Wheat Other	Near Average Winter Wheat Spring Wheat Other	Below Average Winter Wheat Spring Wheat Other
Types of crop harvested	Winter Wheat	Spring Wheat	Other
Did your farm store part of your 2007 harvest in on-farm storage?	Yes	No	

What % of your crop was stored on-farm if any.	Winter Wheat _____%			Spring Wheat _____%			Other _____%		
How was your 2007 crop that moved to an elevator moved?	Farm truck _____%			Commercial or For Hire Truck _____%			Other _____%		
How far did your farm move the 2007 crop to an elevator	Winter Wheat _____miles			Spring Wheat _____miles			Other _____miles		
Is your farm hauling further today, to market your grain, than 10 years ago?	Yes			No					
How far did you haul your 2007 grain to market?	0-10 miles	11-20 miles	21-40 miles	41-60 miles	61-80 miles	81-100 miles	100-120 miles	120+ miles	
How far did you haul your grain to market <u>10</u> years ago (1997) if applicable?	0-10 miles	11-20 miles	21-40 miles	41-60 miles	61-80 miles	81-100 miles	100-120 miles	120+ miles	
How far did you haul your grain to market <u>20</u> years ago (1987) if applicable?	0-10 miles	11-20 miles	21-40 miles	41-60 miles	61-80 miles	81-100 miles	100-120 miles	120+ miles	
What kind of highway are you moving your 2007 grain to market on?	US Primary or Interstate _____%			State or Secondary Highway _____%			County or other highway _____%		
What percentage of winter wheat moved was old crop (pre-2007) and what percentage was new crop of the 2007 movements made from your farm?	Winter Wheat Old Crop (pre-2007) _____%			Winter Wheat New Crop (2007) _____%					
What percentage of spring wheat moved was old crop (pre-2006) and what percentage was new crop of the movements made from your farm?	Spring Wheat Old Crop (pre-2007) _____%			Spring Wheat New Crop (2007) _____%					
What percentage of 'other' (not spring or winter wheat) crop moved was old crop (pre-2007) and what percentage was new crop of the movements made from farm?	Other Crop - Old Crop (pre-2007) _____%			Other Crop - New Crop (2007) _____%					
How many elevators did deliver your farm grain to this year?	One			Two			Three or more		
Were any of your elevators you utilized plugged (unable to accept grain) at any time during the harvest period?	Yes			No					
If an elevator became plugged that you normally utilize – how long was it plugged? – if you know	One day			Two – four days			More than four days		
Did the elevator that became plugged – become plugged more than once during the harvest?	Yes			No					
Do you know the reason for the elevator becoming plugged?	Lack of Rail Cars			Mechanical Problem/Elevator			Do Not Know _____		
If your traditional elevator could not accept your grain – did you transport to an alternative elevator site or just hold off delivery?	Transport to alternative elevator			Held off delivery until elevator could accept grain					
Please rate your harvest transportation delays	Worse than normal			About normal			Less than normal		
Were the transportation delays more prevalent at smaller (less than shuttle loading) elevator facilities or larger ones – shuttle (110 car)?	Smaller elevator			Larger (shuttle) elevator					
Did you transport any of your grain to a 110 car shuttle facility?	Yes			No					
If your farm transported any of your grain to a shuttle facility – what percentage of your grain was moved to a shuttle (110 car) facility?	Winter Wheat _____%			Spring Wheat _____%			Other _____%		
What is your Average wait time at your Elevator in hours? Elevator 1 _____ Elevator 2 _____ Elevator 3 _____									
Do you always get a better price from a shuttle elevator than from smaller elevators? Yes No									

If so, (please circle best answer)(a) less than 1 cent per bushel, (b) between 1 and 3 cents per bushel, (c) between 4 and 6 cents per bushel, (d) more than 6 cents per bushel.

If you do get a higher price from a shuttle elevator, how much of that higher price is consumed in trucking costs to reach the shuttle facility?

Additional comments: